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ORIGINAL ARTICLES.

SOME CONSIDERATIONS ON THE THERAPEUTICS OF DIABETES MELLITUS.

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A great many observations on the nature and therapeutics of diabetes mellitus have been collected during the last few years. While in former times it has been thought that those suffering from this disease where of necessity incurable, or in other words, almost candidates for death, a belief has gained ground recently that even this illness can be treated successfully, or with such results that the prognosis need not be necessarily a grave one. Cases of diabetes mellitus may be cured under attentive treatment provided that both physician and patient co-operate, and in no disease is the co-operation of the patient of such importance. From the very nature of the disease it is readily understood that dietetic measures are absolutely necessary to successful treatment; and as the physician can only give indications as to the food to be partaken of, much will depend on how the patient carries out his medical advisers orders and how he obeys the rules laid down for his observance. Of course, the physician also will have to pay close attention to such cases; a slip in the management of a case will often do sufficient harm to cause endless trouble. So long as patients desire to live according to their own ideas and so long as they intend to enjoy such things as they may like, just that long no success is to be hoped for in the treatment of diabetes, and the physician will do much better to leave such cases alone, especially after the gravity of the disease has been duly explained to the patient and after he has been informed that a disease so severe in character as diabetes mellitus cannot be cured by the convenient exhibition of a few pills or a pleasant draught.

Regarding the practical therapeutics of this disease, it should be first considered what object such a treatment should have in view, and what means are at our command to relieve the symptoms and finally, if possible, bring about a cure. The ultimate results to be avoided, or in other words, the direct cause of the lethal end of diabetes may be classed within four divisions:

1. General marasmus, on which some acute disease supervenes and which causes death within a short time—a weakening of the constitution which does not permit the supervening disease to take its way towards recovery. The acute supervening disease may be of the most common nature, as pneumonia or typhoid fever, and does not have its origin at all in the diabetic state; it is to be regarded in the light of an acute complication.

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2. Diabetic coma, caused by the diabetic state, or coma caused by some supervening disease.

3. Changes within the vessels and large organs, caused or favored by the diabetic state, such as nephritis, fatty degeneration of the heart, or changes within the arterial walls leading to apoplexy.

4. Gangrene, either in consequence of wounds or injuries, or within the lungs, caused and favored by the diabetic state.

The object of treatment would be, according to this;

1. To relieve the diabetic state as much as possible, the only means to attain this being the use of a proper diet.

2. To use such therapeutic and hygienic measures as will prevent the occurence of intervening disease and relieve it when already existing.

It is hardly necessary to state that as not all diabetics will fail from the causes above mentioned, it requires somewhat of a diagnostic experience as to the measures to be taken in individual cases. Of course, an anti-diabetic diet should be used in all cases, however light or severe; but as to the proper hygienic methods or drugs to be employed, much latitude can be allowed and much will depend on the individual abilities of the physician. Many will get along without drugs, others must have such functions as are lagging or disturbed restored to proper activity, while in still others the most importance must be given to hygiene.

Generally speaking, diabetics may be arranged under two classes: 1. Those in whom by the observance of a proper diet the sugar in the urine will disappear entirely while such a diet is strictly observed, and in whom after the disappearance it will not return quickly or in very large proportion; 2. Those in whom the sugar in the urine does not disappear even if the strictest diet is observed and most stringent therapeutic measures taken. The former can be called the mild form, the latter the severe form. We assume that in the milder form the sugar is formed in the blood (resp-urine) only after the ingestion of carbo-hydrates, while in the severer form the sugar is also derived from the albuminates. Cases of the latter kind have been observed when the too liberal ingestion of albumen in any form increased the percentage of sugar contained in the urine. It can readily be seen, by the very classification, that there must be a difference in the treatment of the two classes. While a large number of mixed forms also exist, which cannot be classified under either heading, it can be ascertained by repeated examination of the urine, by the observance of a special strict diet, by the general character of the disease presenting itself in the patient, whether the relatively favorable prognosis of the milder form of the disease can be given.

Regarding anti-diabetic diet in general it is noticeable that almost every close observer has his own preferences and of course much difference exists according to the class of cases observed. The strictest diet is perhaps prescribed by Cautain. He permits only meat and fish, no food with even a suspicion of starchy matter, no butter or other fats, no wines; none of those little additions which act as a sort of make believes to the always objecting patient; others are milder in their orders. Naunyn, Ebstein, Pavy, Harley, and many others furnish special tables for the diet to be given in these cases. The main point of all diets, however, no matter how strict or how lax, is this: Daily examination of the urine, with quantitative estimation of sugar, and as soon as an increase or no decrease is noted, back to as strict a diet as the patient will bear. Weekly or biweekly weighing should not be forgotten. In all cases it should also be remembered that the quantity of food, even if only animal nourishment or albuminoids are taken, must not be lost sight of. Cases have been noticed, where the urine was free from sugar on the ingestion of a moderate amount of meat, while when an excessive amount was taken, the urine contained sugar. This is also a further proof of the statement that sugar may be generated in a purely albuminoid diet.

Now to get to the practical side of the diet. It is very easy to prescribe for a patient a restricted diet, furnishing him at the same time a statement of what he may eat and what not. I have found a better plan to map out a diet table extending over a whole week, including every day in the week and prescribing the exact kind of food which should be consumed at a meal, and incidentally I

have found that under those circumstances a patient will be much more apt to carry out instructions than when the whole arrangement is left to himself. Of course, he should be furnished with an outline of the treatment, so that he himself may intelligently understand the why and wherefore of the different measures, and thus will the importance of his carrying out his instructions be impressed upon his mind. It is also much easier to revise a diet table occasionally and the patient himself can be furnished with a substitute list, which will answer in case the articles originally ordered may through uncontrollable circumstances not be obtained or pall on his stomach. Additions to the table are easily made and the effect on the system can be ascertained without difficulty. Another point in favor of this procedure. It is a self-acting check on the patient, as the daily examination of the urine will always show any transgression from the permitted diet and the excuse of similarity between different articles of diet so often offered will not hold good.

In the preparation of this kind of a diet table the ability of the physician as a gourmand will often be taxed to the utmost. I maintain that it is possible to please almost every one in the subject of a restricted diet, provided one has the proper culinary resources as well as proper assistance, and further, the goodwill of the patient. No less an authority than Billroth has remarked that a physician should be as well versed in the kitchen—or in other words, in dietary affairs, as he should be in general practice.

I offer for consideration the following two diet tables: The first one a restricted dietary for the milder cases of diabetes, in which there is a prospect of subduing the disease by adherence to the orthodox strict diet, even if it has to be persisted in for a long time. The second is for cases in which the diet prescribed in the first table has failed and which may therefore be put down as belonging to the aggravated form, in which the main point must be put on the maintenance of vitality and strength and not on the diminution of the sugar. At the same time it has been made an object not to offer any more nourishment containing sugar or its controvertibles than is necessary for the purpose, and much weight has been put upon the fact that food somewhat filling in nature avoids frequency in full meals. See tables p. 432-33.

The tables are intended for patients of ordinary means; of course, they could be largely improved for wealthy patients; for instance, poultry and game of various kinds can be added just according to the means of the patient, likewise vegetables not ordinarily obtainable. Here, in our part of the country, we can obtain the vegetables marked down in the above dietary for at least nine months in the year at a very moderate price and the balance of the time at a not extravagant one. The individuality of the patient is also to be considered and much diversion may or may not be obtained according to his individual tastes. Regarding vegetables, a difference of opinion exists among authors. While many will not assist in diminishing the sugar, still they contribute to diversify the diet and make it more bearable, and not do positive harm. There is no necessity for such strictness when equal results can be attained with less severe measures. The alkaline waters may also be used as table waters and will assist in bringing about a better condition. Koumyss, wherever obtainable, can be substituted for the second breakfast and afternoon lunch with advantage. In this connection it should be mentioned that the Koumyss tablets, now to be had everywhere, will facilitate largely the home manufacture of Koumyss and render its employment cheaper for people with rather limited means.

In the tables above given chocolate and cocoa are also ordered; they should be perfectly free from starch and sugar; such preparations can be had in the ordinary channels of trade. Saccharine can be used to sweeten as a substitute for sugar. It is best for this purpose to order a solution of saccharine in alcohol, say about one grain to one drachm, or to use tablets of saccharine one-fourth grain and mounite q. s. The former can be used in half or whole teaspoonful doses, equal to one-half or one ounce of ordinary cane sugar. The latter from one to four tablets at a time. This will cause almost excessive sweetness already, but if more should be desired, further addition would still be harmless.

FIRST TABLE.

If after one or two weeks' trial the Urine contains only a small amount of sugar, say ½ per cent., strike out all vegetables and insist upon the reduced diet for two more weeks.

	SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Breakfast, 7 A.M.	Broiled Chicken. Coffee. Eggs.	Ham or Bacon with Scrambled Eggs. Coffee.	Ham and Eggs. Lettuce. Coffee or Cocoa.	Poached Eggs. Fried Ham. Coffee.	Oranges. Tenderloin Steak with Mushrooms. Coffee.	Broiled Fresh Herring or Smelts. Fried Eggs. Coffee.	Mutton Chops. Radishes. Coffee or Cocoa.
2d Breakfast, 10 A.M.	Olives. Oysters. Burgundy.	Chipped Beef. Claret.	Boiled Ham. White Wine.	Fromage de Brie. Bitter Ale. Claret.	Buttermilk Iced or plain. Grated Cheese.	Boiled Lobster. Mayonnaise. Claret.	Salami, or other Sausage. Claret, Burgundy.
Dinner, 1 P. M.	Chicken Soup. Roast Chicken, Celery. Mushrooms, Cauliflower. Omelette with Brandy. Beaten White of Egg baked on Crust. Nuts, Claret or Burgundy.	Bouillon. Roast Beef, Watercress or Chicory Salad. Cauliflower, boiled plain. Swiss Cheese. Riesling or Claret.	Oxtail Soup. Roast Veal. Spinach with Egg. Celery, Radishes. Oranges. Claret, Riesling.	Celery Soup. Roast Lamb. Asparagus or String Beans. Olives, Celery Salad. Claret, Riesling.	Consomme or Bouillon. Roast Pork. Red Cabbage. Lettuce or Chicory Salad. Cucumbers. Grated Cocoanut boiled in milk. Coffee.	Oyster Soup with Eggs, or Oyster Stew. Striped Bass or other Broiled Fish. Sprouts or Cabbage. Omelette. Coffee.	Hamburg or Porterhouse Steak, with Egg. Salad, Sausage or Cheese. Nuts. Coffee. Wine.
Lunch, 4 P. M.	Ice Cream—pure, without sugar or starch. Claret, Riesling.	Nuts. Coffee.	Oysters. Wine or Coffee.	Sardines in Oil. Claret.	Chocolate. (prepared.)	Anchovies, or Herring, or Sardines. Claret or Bitter Ale.	Boiled Ham. Claret or Chocolate.
Supper, 7 P. M.	Cold Chicken, Lettuce. Chicory or Roman Salad. Soft-boiled Egg, Tea.	Bouillon. Mutton Stew, with Onions. Brussels Sprouts, with Butter Boiled Eggs, Lettuce. Tea.	Oxtail Soup. French Veal Chops. Tomatoes. Omelette, Lettuce. Radishes. Tea.	Bouillon. Lamb Cutlets or Chops with Asparagus. Oysters and Tomatoes. Tea.	Bouillon. Pork Chops. Stewed Tomatoes. Artichokes or Oyster Plant Shrimp Salad. Tea or Wine.	Roast Oysters. Soft Boiled Eggs Spinach or Cauliflower. Lobster or Crab Salad. Wine.	Broiled Duck. Celery. (or Broiled Steak.) Cold Slaw or other Salad. Artichokes, Asparagus, Spinach. Claret. Roquefort Cheese.

SECOND TABLE.

SECOND TABLE.

	SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Breakfast, 7 A.M.	Broiled Chicken. Eggs. 2 ozs. Toast. Coffee, Cream.	Ham and Eggs. Toast. Coffee and Cream.	Ham Omelette. Toast. Coffee and Cream.	Bacon and Eggs Fried or Scrambled Toast or Rolled Oats, 4 ozs. Coffee, Cream.	Hamburg Steak with Egg. Two ozs. Bread. Coffee, Cream.	Tenderloin of Sole, Breaded. Or Omelette or Fried Smelts. Toast. Coffee, Cream.	Ham and Eggs. Coffee and Cream. Toast (3).
2d Breakfast, 10 A.M.	Pickles, Olives. Oysters. Claret.	Broiled Ham. 4 ozs. Rye Bread and Butter. Bitter Ale.	Cream Cheese. Rye Bread. Claret.	Buttermilk. Fromage de Brie. Rye Bread.	Ham Sandwich. (2 ozs. bread with plenty of butter.	Oysters. Cocoa. 2 ozs. Bread.	Boiled Egg. Olives, Pickles. Claret.
Dinner, 1 P.M.	Chicken Soup, with Rice. Chicken Fricassee on Toast (2 ozs.) Cauliflower, Asparagus. Oyster Patties (only the oyster to be eaten). Calf's Foot Jelly. Wine. Coffee.	Consomme or Bouillon. Roast Beef or Boiled Beef, with Mashed Potatoes fried in Butter, to make Potato Balls. String Beans. Nuts. Claret or Burgundy.	Vermicelli Soup. Roast Veal. Cauliflower. Potato, fried in Butter. Salad or Radishes. Currants. Claret.	Rice-Tomato Soup. Lamb Roast and Spinach. Potatoes (Saratoga Chips). Lettuce or Chicory. Cocoanut Pudding, without Sugar, or Bordeaux Sauce. Burgundy.	Bouillon. Roast Pork. Potato Dumpling (2). Red Cabbage. Shrimp Salad. Claret, Coffee.	Oyster Stew. Fried or Broiled Fish with Saratoga Chips. Lettuce, Chicory. Watercress. Coffee.	Celery Soup. Breaded Pork Chops. Potato Dumplings. Spinach or Asparagus. Cream Cheese. Coffee. Claret.
Lunch, 4 P.M.	Ice Cream (pure), or Roman Punch. Coffee.	Chocolate. One Fresh Roll.	Cocoa. One Fresh Roll.	Anchovies or Oysters. Wine.	Sardines in Oil. Claret.	Herring or Sardines, with Potato Salad, or Lobster	Smoked Tongue Sandwich. Or Sausage, with 2 ozs. Bread.
Supper, 7 P.M.	Olives, Radishes. Lamb Cutlets, or Broiled Sweetbreads. Asparagus. Coffee or Wine.	Soup. Cold Roast Beef. Sardines. Lettuce. Coffee, Tea or Wine.	Breaded Veal Chops with Stewed Tomatoes. One Potato Ball. Soft Boiled Egg. Salad, Wine or Tea.	Lamb Chops. Asparagus. Potato Pancake (1). Fried Eggs or Omelette. Tea.	Mutton Chops. Cold Slaw. 2 ozs. Bread. Omelettes, Plain or Spanish. Tea.	Roast Oysters or Baked Fish. 2 ozs. Bread. Shrimp Salad. Claret.	Mutton Stew. Onions and Sprouts. Stewed Tomatoes. Omelette. Plain or Spanish. Claret, Burgundy. Tea, Coffee (4).

FOOT NOTES TO TABLE II.

1. POTATO PANCAKES. To make this culinary preparation, take about one pound of potatoes, grate the same and press through cheese-cloth; this will partly remove the starchy matter. Mix this paste with one beaten egg, two tablespoonfuls of milk, and about six tablespoonfuls of sour cream; add salt and pepper, divide into flat round cakes and bake in plenty of fat.

2. POTATO DUMPLINGS. Press a pound of potatoes as above, beat up with egg, milk and sour cream, as above. Mix well and add to the mass a trifle of yeast, about the size of a bean. Let stand for an hour, form into balls and boil in bouillon, until done, *i. e.*, until they float on top.

3. TOAST. When referred to above, it always intended to give about 2 ozs. at a time.

4. RECIPES for the preparation of all dishes mentioned in both tables can be found in any cook-book with the exception of the above specified ones. For sweetening nothing but saccharine is to be used.

As far as the wines ordered are concerned, it is absolutely necessary that they should not be sweet wines, that is, contain sugar in a free form. Clarets, Burgundys, Bordeaux of the red wines, light Rhine wines, Morelle wine, California, Reisling and very light and mild Sauterne (heavy Sauternes contain much sugar) as white wines are about the only varieties permissible. Beer, ale and porter must be strictly prohibited, only bitter ale as containing a mere trifle of malt being allowed at times. It is best to have all wines and other liquors examined regarding the sugar contained therein before advising a patient to drink the same. Gravies and sauces for the first table must be simply prepared from the meat juices; in the second class, where a strict albuminoid diet is not carried out, a little flour may be added for the purpose of thickening and flavoring.

Regarding bread, it should be remarked that during recent years Ebstein, of Gottingen, has obtained excellent results with a special form of flour called aleuronot which he has baked into aleuronot bread in various proportions with ordinary flour. Its advantage lies chiefly in the better taste, and is reported to be the best substitute for ordinary bread. Any one who has treated a diabetic knows what this means. As yet it is not obtainable in this country, but no doubt soon will be. Such a preparation will enrich the dietary of the diabetic to a great extent and in fact will aid to bridge over the main difficulty. Toasted bread or the crust of fresh roll in limited quantity have often been allowed as possessing less controvertibility than ordinary bread and certainly being of more advantage than the various forms of gluten bread and anti-diabetic biscuits, only too often carelessly prepared and actually useless. Many patients would just as leave chew saw-dust as such biscuits.

Milk or cream may ordinarily be allowed to diabetics; caution should, however, be observed, as it has been demonstrated that an increase in sugar will follow the plentiful ingestion of milk in some cases. As far as the skimmed milk is concerned, it is well known that Doukin maintained to cure diabetes by a strict skimmed milk diet. It may be of advantage in some cases and should be tried when the disease is obstinate. One rule must always be observed in attending to the diet of a diabetic patient. If the patient wastes away on any diet, no matter what, his dietary must be looked after at once; the wasting of his body in flesh and power is as much, if not more, an index for treatment as the quantity of sugar in the urine.

The hygienic part of the treatment should also be given especial attention. Of course, the entire mode of life cannot be changed with all patients. It is well enough to order the patient to lead a quiet life, free from worry, etc., but it is not always feasible to carry out such injunctions. Patients must be instructed to avoid all excess and dissipations, late hours, entertainments which may cause much nervous excitement and such other so-called pleasures of civilization which may not harmonize with the plan of treatment. In regard to clothing, flannels should be worn next to the body, and the patient warmly but comfortably dressed, so as to avoid all unnecessary exposure to colds, which may become quite dangerous in his condition. The skin should be kept clean by frequent baths and douches. Teeth and mouth should be cleansed by the frequent application of tooth brush and water and much care should be given to the general condition of the mouth.

Exercise in the open air must be prescribed for all patients able to be about. It should be used in proper moderation and in the different forms suitable—walking, riding, gymnastics. If the patient is too weak for active exercise, massage may be substituted for it. In patients yet possessing sufficient strength active personal movements will be of more advantage than massage possibly could be. Turkish baths are also useful in the milder cases as they excite the skin and relieve the kidneys somewhat of their work and conduce to the well-feeling of the patient.

Not much can be said as to the efficiency of drugs in the treatment of diabetes mellitus. Many have been tried and equally many have been found wanting. Antipyrine, jambul, opium and its alkaloids, especially iodine, iodoform, salicylic acid and the salicylates, quinine, saccharine, peroxide of hydrogen, arsenic, carbolic acid, the various salts of zinc and the valerianates, all have had

their day and none have been of more than symptomatic value. In fact, medication in this disease is altogether symptomatic.

Cod liver oil deserves in this respect perhaps the front rank, its purpose being to aid in keeping up the vitality of the patient and thus it will always be of value in this disease.

To classify the value of drugs in this disease would be a difficult undertaking; whatever symptom may be the most prominent should receive the most attention. The excessive thirst so often complained of is often quenched by the administration of alkaline mineral waters or by copious cold water enemas; the latter often are very efficacious when other means have failed. The craving after certain foods can be alleviated by occasional doses of opium and cocaine. Gastric disturbances must be treated by the ordinary means according to their origin, and it should not be forgotten that patients suffering from diabetes are very liable to neuroses of the digestive system. The diabetic always suffers more or less from nervous disturbances. Neuralgic affections of the different nerves, partial paralysis, anæsthetic and hyperæsthetic areas, spasms, etc., occur often and baffle medical ingenuity.

Cutaneous diseases are also very frequent and equally obstinate; pathologically considered, those diseases of the skin which are of an acknowledged neurotic origin, such as zoster, urticaria and pruritus occur most frequently in diabetes. Furunculosis is also a very frequent accompaniment of diabetes; the sulphide of calcium in rapidly increasing doses has proved most successful in this complication. Preventive treatment, however, is the most effective and therefore the diabetic should not neglect those hygienic measures which pertain to the skin.

Much has been said about the use of the alkalines in this disease and much good has been reported from it. The mineral waters of Carlsbad, where the treatment of diabetes is carried on in a very large way, are especially vaunted for their efficacy. The activity of the alkalies, however, seems to be limited to the cases characterized by obesity, plethora, and gouty symptoms and it is mainly through this class of patients that Carlsbad has obtained its great reputation. The use of the sprudel coupled with the strictest injunction regarding diet, in connection with the change of surroundings and different mode of life, does not fail to benefit the cases mentioned.

In the severe form, where sugar is formed continually in spite of rigid albuminoid diet, it would be folly to resort to such active medication. Cod liver oil, a diet containing a moderation of starchy food, in conjunction with tonics suitable to the case and proper hygienic measures will then be of undoubted benefit.

When coma has supervened therapeutic measures are of almost no avail; the cases in which a successful result was had, are few. Saline enemas, intravenous injections of warm normal salt solution or of a 3 per cent. bicarbonate soda solution, transfusion of blood, all the ordinary stimulants such as ammonia or alcohol, are recommended from various sources and success is claimed. Inhalations of oxygen have also been given. Schmitz, of Neusnahr recommends large doses of castor oil, with the purpose of bringing about quick and copious evacuations, as he thinks that decomposition of the intestinal contents has much to do with the cause of the coma. It has been objected to this procedure, that on the other hand, it is often noticed that comatose diabetics could not retain their fæces and still perished. This latter might, however, be also construed as an unsuccessful effort of the vis medicatrix naturæ. Anyway the suggestion deserves a trial from its very simplicity and the hopelessness of other measures.

Don't.

Don't fancy that you are insulted, or that there is a conspiracy against you, because your articles come back. It is a physical impossibility to print more than a very small percentage of those that are offered.

Don't overwork the useful word and. Once is often enough for it to appear in a sentence, as a rule. When you see it staggering from fatigue, take it out of the ranks, put a period in its place, and begin the next word with a capital.

COMMUNICATIONS.

PELVIC INFLAMMATION.*

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Pelvic inflammations in women are so common, so painful, so dangerous, so persistent, so often incurable, so continually destructive, so frequently overlooked, so often negligently treated in the early stages; that a discussion of the subject cannot fail to be of benefit to us.

In presenting a paper the author writes either "from experience" or "for experience." The young docter writing "for experience" is often the subject of some little contempt on part of older and more experienced readers. But in writing for a society "for experience" may be of just as much value as "from experience." I come before you to-day to get the benefit of your views upon the topic just stated. Let us have the experience here to-day of the general practitioner. I write for his experience; how he observes these cases, how frequently, traces them to what causes, what methods of diagnosis, what plans of treatment he employs, how successful is he. I earnestly call upon him to give us the benefit of his work and of his study and observation. I write to-day for the experience of the physician-gynecologist, will he teach us of the cases he has watched and I trust faithfully recorded.

Of the surgeon-gynecologist let us be informed of what he finds and how he finds it. Will he not tell us his views from the store of his knowledge in dealing with the results of inflammation of pelvic organs. Of the ravages produced, of the destruction, and may we not expect that his work may be helpful in showing how such conditions may be avoided and such danger averted. Certainly an interchange of views will be of benefit and with this plea I submit a little of my own experience and ask yours in return.

When speaking of pelvic inflammation our ideas may be somewhat confused. Under the guide of former teachers many doubts arose as to the nature and results of pelvic diseases. To-day pelvic inflammation is only another expression for inflammation of the ovaries and tubes, for upon the health of these organs depends the health of the patient, and what damage will be wrought to these organs is the constant anxiety of the physician. Pelvic peritonitis indeed we might say is almost all that we to-day consider is our study of pelvic inflammation. Hence we speak almost synonymously of pelvic peritonitis, tubal disease, inflammation of tubes and ovaries, and disease of the appendages.

We have long ago left behind the various designations of parametritis and perimetritis because they did not designate. So then when we come to consider the causes of pelvic inflammations we ask ourselves what are the things and circumstances that will produce dangerous and lasting injury to those essential, if not vital, organs.

Let me be not misunderstood, for I have not said there was no pelvic inflammation without involvement of these organs, but there is no pelvic inflammation without danger of these organs becoming involved and their delicate and proper function destroyed. Let us not say there is no pelvic cellulitis, but insist that it is far less common than pelvic peritonitis and is found uncomplicated with tubal disease very rarely.

Inflammation of the fallopian tubes and ovaries and the peritoneum which surrounds and is in relation with them, is very common, and the inflammation generally presents itself in attacks or recurrences. It is very rare that an inflamed tube is restored to perfect health, and an ovary once inflamed never escapes lasting injury. Inflammation of the tubes as a rule, is primarily of the mucous lining, extending outward from the uterus to the fimbriated extremity, thence to the contiguous peritoneum. The irritant that produces pelvic peritonitis almost always comes from without. The exciting cause almost without exception, is septic material introduced into the vagina and uterus.

The first effect of a septic material so carried up until it reaches the peritoneum,

* Read before the Mitchell District Medical Society at West Baden Springs, July 13, 1893.

is inflammation of that membrane. Rapidly it responds and its first effort is to throw out inflammatory lymph, by which process it first seals up the fimbriated extremity of the tube and thus prevents the exit of any more poisonous or irritating material. The lymph exudate does not stop here, but more is poured out as the inflammatory process goes on, until the tube is enclosed and walled off from the rest of the pelvic and abdominal cavity. While this has been going on the uterine end of the tube has also become occluded by the infiltration of the tissues until the fallopian tube is hermetrically sealed at both ends and lies enclosed in a protective capsule of natures aseptic lymph.

This is a hasty explanation of what takes place in the pelvis at the beginning of an attack of pelvic inflammation. Now what symptoms does it present, what are the signs by which we recognize that this process is taking place? Most frequent and constant of all symptoms is pain, and localized to the ovarian regions. Most of the patients will cover with the point of the finger the spot at which they first felt pain, and with great uniformity they place the finger over the site of the ovary. The pain is most acute, and in some cases amounts to an agony. I need not dwell upon this point, for every physician here knows how severe the pain of a peritonitis may become. Then tenderness and high temperature quickly supervene. Nature's battles between tissue destroying and tissue preserving elements is always attended with fire.

There is not infrequently a chill to denote that a battle is on, and rising temperature and pulse at once begin. So pain, fever, tenderness, swelling, tympanites rapid pulse, all are consequent upon this process. The tenderness over the abdomen is nothing to the tenderness of the tissues touched by the examinining finger about the uterus. Swelling of the uterus, lumps in either side and cul de sac, painful lumps, masses, loops of tube, misplaced inflamed ovary, all the organs on fire, this is what will be found in an early stage. Gradually however, under treatment these symptoms subside. The pain gets better, but the soreness persists for a longer time. It may be days or weeks before she can move without pain, and it may be that never again will she be free from that soreness and lameness and tenderness that results from this condition. The ovary and tube may be folded upon themselves, wrapped up in the broad ligament and enclosed. Menstruation occuring soon is liable to light it all up and set it all going over again. A function that once was easy and natural now becomes a torture. Instead of a few days it may last many. The engorgement of the parts at the monthly epochs only excite again the inflammation. Every day, nature makes more effort to protect its inflamed part, bands of adhesions fasten the uterus and drag it into unnatural positions. In short, the inflamed tube adheres to every thing it touches and these adhesions become in time so dense and hard that, as one of my friends has said, "this mass has grown fast to every thing but her soul."

In case the irritant that has set up this process contains pus producing microbes we will have a much more serious state of affairs confronting us. The pus may be in such small quantity that it may become encased as it were in a small portion of the tube and the surrounding tube thickened to an extreme degree, constituting the so-called parenchymatous salpingitis or pachy salpingitis. I have a specimen of this kind from a case of my own, from the cut surface of which pus could be squeezed. In such cases the adhesions are liable to be very abundant owing to the greater effort made to shut off the pus from the general peritoneal cavity. The hardness and density of the adhesions as well as the malposition of organs will depend of course on the degree of inflammation and the length of time it has gone on. In cases where pus forms in the tube the temperature is liable to be very erratic. It may be very high or on the other hand hardly above normal, but the persistence of the fever is what guides us to the presence of pus. These cases of pus in the tube also are the ones in which ugly perforation of the bowel may occur. The pus may burrow and abcesses point in the vagina or near the rectum, and sinuses are left which refuse to heal because a diseased sloughing tube remains as a nidus. These abcesses and sinuses are only natures poor efforts at laparotomy. The pus must get away. No longer is she able to wall it in, but she must evacuate it.

Given then a case of pelvic inflamma-

tion, what plans of treatment can we pursue to allay the inflammation and if possible to prevent formation of pus. As for the treatment of pus cases there is only one course to pursue and that is operation. As a rule, however, these are not cases of pus from the start, and it is to the cases of inflammation not purulent in character that our plans of treatment must be directed.

The first indication is to relieve pain and this can be done in most instances best by early adminstration of saline purgatives. Epsom salts in saturated solution is the quickest an most rational method of lessoning pain. It empties the bowels. It abstracts moistures from the tissues. It drains the engorged pelvic vessels and diminishes blood supply to the inflamed part by bleeding one vessel into another. Those of us who are still wedded to the opium treatment of peritonitis will smile with incredulity at the assertion that the pain can be relieved with salts, yet such is the fact and if you don't believe it, try it.

Glycerine into the rectum is another way to relieve the pain quickly, and it does so in the same manner by setting up an outward osmatic current and lessening the engorgement of the tissues. Another drug that is of splendid service is the salicylate of ammonia. Give it in 3 grain doses every two hours and it will lower the temperature, stimulate the heart and kidney, eliminate rapidly from the circulation waste material and is the most reliable intestinal antiseptic that we possess. It is at the same time a valuable antipyretic and possesses analgesic properties only a little inferior to acetanilid. I pass over many other drugs of whose action you know so well, and speak of the local treatment. In the first few days it will be almost impossible to use any treatment whatever locally. The pain and tenderness is so great that it cannot be tolerated, but after free purgation we can apply loose tampons of glycerine over the irregular masses that can be felt under the finger. The effect is sometimes very striking. The swelling is frequently rapidly reduced, but much depends on how the applications are made. No good can come of placing them against the cervix, they must be against the painful tube, slightly lifting it and supporting it, but never making hard pressure. After the tenderness has grown less and after a few days have elapsed, the negative pole of a galvanic battery may be applied. Once every 48 hours is enough and not over 20 milleamperes for not over ten minutes. The effect upon the pain from this application is not infrequently simply wonderful and certainly the swelling does diminish. I cannot be mistaken surely in the effect that I have seen produced, notwithstanding so much has been said by better men against it. Under its influence I have certainly seen lumps, masses, hard tender masses in the broad ligaments disappear, the uterus become movable and the hardness of the vaginal vault disappear. I certainly have seen the effect in some cases, and then again I have just as certainly seen all my best efforts fail and the only thing I could effect was amelioration.

The masses could be made to grow smaller and less tender but they would not go away. The temperature would not go so high but would persist. The uterus was more movable but still fixed and misplaced. The pain was not so great but it was still there. She could maybe straighten out her leg, but for the most part it felt easier to draw it up. The night sweats were troublesome, and although she could sleep some at night, she would have a tired, worn look in her face in the morning. One day better, the next worse. Pain, disappointment, feebleness, tenderness, suffering and chronic invalidism staring us in the face; in short my patient's life was endangered and her health ruined by a something in her pelvis. Many of you have seen cases that so went on, month after month, you were discharged and some one else tried and so on. Now what is the best thing to do with these cases that do not get well. They won't get well. Nature is powerless; art must aid. Abdominal section offers the most brilliant and successful page of modern medicine and surgery in the treatment of these very cases of chronic inflammation of the pelvic viscera. Open the abdomen and remove the source of the disease. Most of the cases will recover under treatment and rest and proper care, but some will find their only relief at the hand of the surgeon. We are able to-day to cure many an invalid that only a few years ago was resigned to opium and an early grave. Cases that only a few years ago would have come under that now rapidly diminishing list-incurable, can now be not only saved but cured, to stay cured and fill a useful place in society.

THE TREATMENT OF CARBUNCLE BY CARBOLIC ACID INJECTIONS.

C. H. WILKINSON, M. D.,* GALVESTON, TEXAS.

On June 11th, 1893, I was called to attend Mrs. S., living some twenty-one miles in the country, for a carbuncle which had existed a week.

I found the lady in bed, with high fever, and apparently suffering severe pain from the effects of a carbuncle situated immediately under the right scapula, and which with its highly inflamed and sensitive areola was about the size of a large saucer. From long continued pain the patient's nervous system had become highly wrought up, and long fasting had reduced her strength to that of a child. Selecting four of the most conspicuous sinuses perforating the growth, I injected into each one of them a solution containing two minims of carbolic acid, throwing the remedy in each instance out towards the periphery of the tumor, and towards the most highly inflamed portions. Directing her to keep hot poultices applied to the diseased parts until all suppuration had ceased, I left the case and did not see her until the 25th of June, two weeks later. At this date the carbuncle was practically well, and the patient had been up and riding about the country for several days. All fever, pain, inflammation, etc., had entirely disappeared, and a silver dollar could have covered the small healthy ulcer remaining.

Now, there is nothing much in the mere recital of the foregoing case, except the principle established by the treatment pursued. For the past fifteen years I have been treating carbuncle by the acid injection plan, and I can unhesitatingly pronounce the process to be as near a sure and speedy cure for this dreadful malady as can be found in any text book if we except the knife as a means of cure. But unlike the knife, the acid produces comparatively no pain, and almost anyone can employ it in such cases if supplied with the proper equipment; to wit: the acid itself and an ordinary hypodermic syringe.

I usually add to ten minims of pure carbolic acid as many drops each of alcohol and glycerine, and have then as much of the injecting fluid as would be needed to cure the largest sized carbuncle. One grain of cocaine might be added to the above to insure freedom from pain in its administration, but this is hardly necessary as the carbolic acid itself soon acts as a local anæsthetic, and the little smarting that attends its use only lasts about a minute.

An ordinary hypodermic syringe is generally employed to inject this fluid with, though a Heaton hernia needle is preferable on account of being supplied with a blunted point. Of the foregoing mixture twenty minims should be injected right and left through the tumor, care being used to throw the fluid out towards the inflamed periphery until all portions of the carbuncle have been reached. Any excess of fluid which may ooze back through the sinuses should be picked up with clean blotting paper, and after every such injection a soft pad of absorbent cotton should be bandaged down upon the growth. Usually one of the injections will suffice, but occasionally it may be found necessary to repeat the operation in the course of forty-eight hours, should the first not be sufficient to allay the inflammation.

My attention was first called to the effects of carbolic acid upon carbuncle in 1878, when I saw a case delirious and nearly dead from the action of this terrible disorder, which I cured in a few weeks by the acid treatment. Many other cases fell in my hands shortly afterwards, all of which made excellent recoveries under the same treatment. So that in October, 1885, believing that I had established a principle in this direction, I brought the subject before the Galveston Medical Club in an article which was soon after published in *Daniel's Texas Medical Journal*, and which received many favorable notices from other medical publications.

However, the older methods are still in vogue by many surgeons, and the knife and curette are almost as busy to-day upon carbuncle, much to the horror of the victims, as they were twenty years ago.

Carbolic acid is speedy, safe and cer-

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tain, as well as a painless agent in controlling these morbid productions, and I am surprised that its employment is not more universally advocated by the profession than it is. Carbuncle is a disease attended by a specific, or rather by a peculiar form of inflammation, an inflammation that resembles erysipelas in its external manifestations, and its tendency is decidedly towards not only the death of the parts affected, but towards the death of the patient himself.

It has little or no respect for the *vis medicatrix naturae* and if not molested by surgery will destroy the life of the sufferer in two or three weeks. Many excellent citizens of this state have fallen victims to its ravages in the last few years, whose lives might easily have been saved had the acid treatment been resorted to at almost any stage of the patient's disease, and it is just to prevent similar occurrences in the future that I have been induced to bring this method of treatment before the public again.

Carbolic acid immediately destroys the peculiar inflammation or rather the cause of this peculiar inflammation which attends carbuncle. Rarely is it necessary to repeat the injection method if the first was administered properly, as was done in the case of Mrs. S., referred to, so that a physician can actually conquer one of these pathological monsters in ten minutes, or less time, and return to his office feeling confident that his enemy will give him no more trouble.

It is true that some care and nursing will be required in the retrograde stage of carbuncle-poulticing, strapping and silver applications will probably be required to expedite healing, but the specific nature of the sore having been destroyed by the acid, we have left only a simple, healthy ulcer to look after for a few days, instead of a malignant and tormenting affection.

RAILROAD SURGERY.*

W. MURRAY WEIDMAN, M. D., READING.

Through the courtesy of your presiding officer the honor of presenting the customary "Address in Surgery" devolves upon me. It must be conceded that the multiplicity of journals, in which the various plans of treatment in hospitals and private practice are reviewed, by an army of earnest workers, whilst shaping opinion, has a tendency to confuse the judgment of the busy practitioner remote from medical centers. This accumulation of diverse ideas would have occasioned your writer much embarrassment had he not been able to avail himself of the resolution of 1871, which permits, restriction of the subject to certain problems "in surgery," a privilege also accepted by his predecessors, many of whom were more highly favored by being reared within the walls of medical colleges and surrounded by hospitals and laboratories. Nevertheless, with much diffidence the task is undertaken in the endeavor to gratify friends who have requested the paper to be practical, thus realizing that the subject presented must be especially intended for those who, like the author, belong to to the class remote from the medical centers, but not without the hope of recalling some experiences which in the practice of all have proven to be efficient and certain means of relieving suffering humanity, especially in injuries incident to employees on railways.

The advances toward perfection, in our science, are not of such rapidity as to be marked by annual strides. Remedies and plans of treatment presented plausibly by conscientious advocates are frequently held in abeyance only to be discarded by the test of time. The principles governing the treatment of accidents are the same whether applied in hospital or elsewhere. The technique, which ought to be the same, is dependent upon the armamentarium and the conveniences of application. Hence the occasional visitor to the medical ampitheatre is often apparently much more interested in the preparations and arrangements than in the dexterity of the operator or subject presented, which are an expression of an endeavor to condense into

* Address in Surgery before Pennsylvania State Medical Society, 1893.

the emergency bag, (to be used under adverse surroundings,) all the essentials of improved surgery as exhibited in the professor's arena.

Many of you have have frequently been called, at all times, to accidents of a certain class, and fully realize under what conditions patients are found, how difficult and almost impossible the application of asepsis. For example the patient is an employee of a workshop or railroad, perhaps even a worse subject, some one who has stolen passage on the railroad. No nurses are near to make the necessary preparation of patient or operation; no blankets or vessels of hot water provided to keep the body warm; no towels steeped in antiseptic solutions to surround and protect the wound from pollution; the clothing soiled with dust and grease, often soaked with blood, rain or perspiration. The assistants are fellow workmen, willing to aid, but like the injured person, their hands are covered with grime and their clothing in little or no better condition. The ampitheatre is Nature's own, or if perchance under shelter, it is only for temporary use, hastily arranged and ill adapted. There is neither time, opportunity nor ability to bathe the injured, considered so essential prior to operations in hospital practice. No attention can be given to the bowels, and the stomach is often loaded with undigested food. Time cannot be lost, the news has spread that an accident has happened and the curious crowd is gathering not only to noxiously impregnate the surrounding air and render it more stifling, but to interfere with the work of the surgeon and his assistants. Added to these discomforts are the patient's bodily pain, mental anguish and the consciousness that loss of time will entail suffering to dear ones at home. The loss of sleep, fatigue, and excessive heat or cold, frequently enhance the difficulties. Fortunately the encouraging words of the surgeon can greatly allay anxiety—the administration of an anodyne or the anæsthetic produce temporary unconsciousness. Happily the establishment of small hospitals, in many towns, through the magnanimity of state and private charity, has of late years done much to improve the service, and formation of relief associations to ameliorate the sufferings of the injured and the wants of those dependent upon wages or salary, has lessened another adverse influence.

HEMORRHAGE.

In the long list of accidents, there is no condition that demands more prompt relief than hemorrhage. No scene is more appalling than the sight of blood gushing in torrents from an open wound; none occasions more anxiety; none taxes the ingenuity, tests the readiness or tries the courage of the surgeon to a greater degree. Of course, the oozing from arterioles and venules, when not spontaneously arrested, can be easily controlled by pressure, exposure to air or by the application of ice or hot water. It rarely ends fatally unless complicated by a hemorrhagic diathesis. Likewise in venous hemorrhage, care must be taken, no matter what measures are employed, to stay the waste, not to obstruct the return of blood to the heart, bearing in mind that position will aid materially in its arrest. It is the arterial flow, that scarlet fluid, escaping in jets, not in a continuous stream, sometimes projected to the ceiling or across a room, that is never stayed by change of position, that causes horror and dismay, that invites, produces and prolongs shock. Many of you, I know, have heard the agonizing cry of the wounded when the nerve is pressed upon, have noticed the turgescence of the veins about the seat of constriction, have seen the anxious countenance, the ghastly pallor, the dilated pupils, the sick stomach, the profuse perspiration preceding syncope, have tried to satisfy the demand for water to quench the thirst, often the direct result of loss of blood and the misapplied garotte, the tourniquet or the elastic constrictor of Professor von Esmarch. Until the police, the trainmen, and the laity are taught that it is wrong to use such appliances above or below the wound, but that they should be directly over the wound or along the course of the bleeding vessel, that pressure will be made against a bone; so long the surgeon must expect interference with union by first intention, if no more serious trouble. Prof. von Esmarch says he has known constriction with his elastic bandage to be maintained seventeen (17) hours unaccompanied by any bad complications or results. It has been demonstrated that such constriction for two

hours and a half has been followed " by an unfavorable influence on the karyokinetic process in the tissues when deprived of blood so long." Prof. Senn at the annual convention of the National Association of Railway Surgeons in 1892, after speaking of the advantages and disadvantages of the elastric constriction announced the following conclusions :

" 1st. The use of the elastic bandage to secure bloodless condition of limb should be discarded, as compression of the parts affected may produce mechanically dissemination of malignant tumors and microbic diseases.

2d. A bloodless condition should be secured by elevation of limb prior to constriction.

3d. Constriction should be made with sufficient force to interrupt at once both the arterial and venous circulation.

4th. Prevent venous stasis by constricting quickly, beginning pressure on the side of the limb supplied with the principal blood vessels.

5th. Linear or too firm constriction should be avoided, as they are liable to give rise to muscular injury, temporary or permanent paralysis.

6th. Elastic constriction of a limb for hemastatic purposes should be diffused over an annular space not less than two inches in width, and can be made with least danger of injuring important structures by a broad elastic constrictor made for this purpose or an elastic bandage.

7th. Circular constriction of a limb should be made if possible, at a point where the large nerve trunks are well protected by overlying muscles, and if this cannot be done on account of site of operation, a thick compress of gauze should be interposed between the constrictor and the limb.

8th. The vitality of tissues when excluded from the circulation is endangered by prolonging the ischemic condition for three or four hours and gangrene may take place if constriction is continued for a longer time.

9th. The process of karyokinesis in tissues deprived of circulation by elastric constriction is unfavorably affected if constriction is continued for more than two hours."

In February last, Prof. von Esmarch unwilling that the principle of his invention, viz: elastic compression, which astonished Billroth and received the commendation of Simon, von Langenbeck and many others, should be descredited; protested against the condemnation of Prof. Senn, who had said it was "not only useless but injurious " as follows. "I have remarked in the beginning that firm elastic compression in cases of suppurative affections is dangerous and advised in such cases to elevate the extremity for a short time before applying constriction and had subsequently no ill result. The same applies to soft malignant tumors, but I do not think it justifiable to abandon elastic compression entirely for these reasons alone, as there are still a sufficient number of cases left to which compression would be unaccompanied by any risks and would certainly be far superior to simple elevation, among which are the following.

1. Operations for necrosis and bone abscesses.
2. Osteotomies.
3. Operation for pseudo arthrosis.
4. Operation for reposition of old luxations.
5. Extirpations of fibroma, lipoma, angioma, osteoma, neuroma, etc.
6. Plastic operations on cicatrices.
7. Operations for Dupuytren's finger contractions.
8. Operations for suturing nerves or tendons.
9. Operations for ligation of arteries and veins.
10. Operations for aneurism.
11. Operations for removal of foreign bodies in deep tissues.
12. Operations for resection of joints without suppuration or running fistula.
13. Operation for obliteration of joints.

The bad results which have been observed after too long constriction, necrosis of the margins of the wounds, slow healing, paralysis, etc., are only caused by unnecessarily tight constriction. The constriction which I use to render the limb temporarily bloodless, as you are well aware, is not the former hard rubber tubing with chain, which I now only use in high amputations and exarticulations of the shoulders and hip joints, but the ordinary rubber band five centimeters, two inches wide, and about one hundred and forty centimeters in length, with an ordinary hook to fasten it. The important part is that the turns over-lap each

other evenly and with equal pressure. In operations on the fore-arm it is applied high up about he middle of the arm and not close to the elbow joint. In operation on the leg the constriction is made to the middle of the thigh and not close to the knee joint, thus avoiding places where tendons and nerves lie in close proximity to the surface where the successful constriction of the parts would be interfered with."

Prof. Senn replies, I will "admit that in the operations named in your letter, elastic compression could be employed without incurring immediate risks, but I must insist that it is not necessary. I have no doubt that if the directions given in the letter concerning the use of the elastic constrictor were carried out properly, we would hear less frequently of paralysis as one of the results of two tight constriction. The fact, however, remains that not infrequently paralysis of the musculospiral nerve follows as one of the immediate consequences of constriction of the arm."

Prof. Ashhurst to prevent the capillary oozing which follows the removal of the elastic tube, recommends "to place a tourniquet in position, but not screwed down, over the main artery of the limb, and then apply the Esmarch tube a few inches above the point at which the operation is to be performed, as soon as the principal arteries have been secured, the tourniquet plate is screwed down, and the tube removed." In this way time is afforded the vessels that may have been di'ated by the paralysis of the vaso motor nerves to regain their normal tone. Prof. von Esmarch's plan is to secure the bleeding vessels, and with deep sutures close the wound.

Prof. Agnew had discarded the use of the elastic bandage, except in special amputations, on account of the time lost in staying the blood from the distended vessels after the removal of the tube and the excessive number of ligatures required. For years the writer in ordinary operations, has depended upon the elevation of the limb, an elastic constrictor two and half inches wide and one yard long, wound round the limb to embrace at least four inches, and its ends secured by means of large hemastatic forceps, in preference to a knot or hook and chain. In amputations involving the hip and shoulders, he has depended upon digital pressure and the hemostatic forceps, in accordance with the advice of Liston, who said he would "trust to a not very efficient assistant rather than put on a tourniquet," as he believed much more blood was lost from the use of the tourniquet than without it.

Anesthesia, the elastic bandage and asepticism have emboldened the surgeon to invade cavities of the body heretofore sacred, to incise and remove entire organs or portions thereof, to open joints, to suture bones, tendons and nerves, to take greater risks, in the endeavor to restore the functions of the body or a mangled limb to usefulness. Conservatism has its limits, and no matter how desirable or tempting the practice is, there remains but one course, to do that which was once considered an act of rashness, haste or brutality, but now is good surgery and an act of true humanity, as there are constantly accidents occurring which demand prompt and immediate amputation. Delay or conservating treatment in these cases is hazardous, encourages pyemia, erysipelas, tetanus, death.. We need only refer to the results, as reported by Bullingham, a sequence of the order of Bilguer, who said "to cut off a limb, after a bad wound, what is it but to add wound to wound, to heap new pains upon a disordered system"—who whilst surgeon in chief of the Prussian Army "forbade amputation in any case and boasted that no surgeon had amputated a single limb. During his term 6,618 soldiers were wounded, one half of those who had a gun shot fracture of the extremities died, and of the remainder more than one-half were left in a state totally unfit for any kind of employment, civil and military. We submit to your judgment how many lives would have been saved had more prompt, more radical treatment been pursued.

AMPUTATION, PRIMARY OR SECONDARY.

The question still remains unsettled, when shall amputation follow injury? Shall it be immediate, primary or secondary? It is stated that Duchesne in 1625, first recommended that the operation "should be performed before the inflammation and other constitutional symptoms shall have supervened." About 1692, Surgeon Wiseman declared himself in favor of primary amputation,

especially in injuries below the knee. Hennan laid down the maxim which Le Dran, in 1737, had promulgated, that "whenever there is plainly a necessity for losing a limb the sooner it is done the better." Pott says "there are many cases," and there ever will be, "where the patient's life is much more put to hazard in an attempt to save a limb than by operation for removing it. It is better for a patient to live with three limbs" or less "than die with four." Prof. S. D. Gross in speaking of railway accidents says they "are extremely liable, if an attempt be made to save the limb, to be followed by the worst results;—often the mischief is deep seated and involves muscles, tendons, aponeuroses, vessels, nerves, bones and joints, the limb is hopelessly injured and will require removal." Prof. Agnew says "persons occasionally recover from wounds of the most extensive and apparently hopeless character, without operation it is true, but such very exceptional cases are not to influence the judgment of the surgeon when deciding upon the propriety of an amputation in any given case." Military statistics amply sustain the practice of immediate amputation. Larrey admits that "a great number of soldiers were lost, although operated upon within the first twenty-four hours, yet the operation had been made too late." During the Crimean War "the success attending primary operations was two-thirds greater than in secondary among French troops," and that among the English troops did not materially differ. At Sebastapol, one-half of the primary amputations performed upon the Russians proved successful, and two-thirds of the secondary ones were fatal. Equally significant are the statistics of the War of the Rebellion, according to Dr. Otis, "who says there were 5,273 cases of amputation in the continuity of the arm for gun-shot injuries whose results were obtained. Of which number 3,259 were primary operations, with 602 deaths, a mortality of 18.4 per cent, 411 were secondary amputations, followed by 114 deaths or 27.7 per cent., 902 were intermediary operations, with 302 deaths or 33.4 per cent." So decided are these figures, that Prof. Agnew concludes "the only condition, justifying delay, when a limb has been doomed to amputation, is shock."

But why delay? Does not hesitation increase the risks from erysipelas, tetanus pyemia, pneumonia, vescical affections and gangrene of the stump? Are the sufferings of the victims diminished? Can the transportation to hospital or home, in a jolting car or over a rough road, be better born with a mutilated limb, dangling in shreds, and covered with dirt and gravel, mixed with gore, no matter how well supported or protected? Will the dangers from absorption of noxious fluids be diminished by such delay? Will the mind of the sufferer, on discovery that the mangled pulpified mass has not been removed, be any easier? The removal of a toe or a finger is done without questioning the amount of shock. In compound fractures of either extremity, the indications are and the practice is, to at once reduce the fracture and maintain the bones in proper position. In depressed fractures of the skull do we not, as soon as the symptoms of compression or paralysis appear, at once elevate the bone and remove the cause of disturbance. In neither case do we delay on account of shock. Why not fulfil the indications when amputation is as obligatory, as promptly demanded? Can the removal of the offendings, unless, cumbersome mass be more objectionable? Why wait for days, weeks, to do what is demanded promptly, and immediately demanded? Can we not under the blessings of modern science care for the stump, better than for the magled parts? Will not the duration of shock be shortened by prompt removal? Why wait until the victim has recovered, only to pass through the same nervous depression? Can we not with the aid of hypodermic injections of ether, whiskey, atropine, strychnia or nitroglycerine maintain the heart's action steady, sufficiently long, to remove the objectionable mass, then surround the patient with appliances favorable to a speedy and safe recovery.

The writer has been frequently summoned to attend persons injured on the railroad in his neighborhood, often reaching the scene of accident within half an hour. His emergency bag, on the outside of which are strapped two tin trays, is always ready and packed. It contains two rubber aprons, two porcelain dishes, a few towels, a newspaper, two cans of Squibbs' ether each one quarter pound, a

cake of soap, (recently a bottle of etherial soap (4 oz) has been substituted), a razor, a fountain syringe (2 qts) with hard rubber stop cock, 1 oz. glass syringe, 50 tablets of mercuric chloride, a bottle of carbolic acid (4 oz), 1 yd. of iodoform, carbolic, boracic and bichloride gauze in tin boxes, one fourth pound of absorbent cotton, one-half dozen sponges, rubber drainage tubes of various sizes, white and black silk, cat gut in hermetical tubes, 4 oz. whiskey, 1 doz. bandages of different lengths, pins, 4 oz. of peroxide of hydrogen, 2 elastic constrictors, 1 pepper box filled with iodoform and boracic acid powder, needles and a needle holder. The instruments and medicines are carried in separate cases. Thus equipped he has always felt ready for any single emergency.

Simple inspection will show how desperate would be any attempts to save a mangled limb. Sometimes the unbroken skin does not even show the extent of destruction. In these cases unless other parts of the body have been injured or delirium exists, not the result of drink, little time is required in preparation to remove the limb.

In giving ether the writer uses a cone, and after a few minutes entrusts the management thereof to an assistant, with instructions to withdraw the cone as soon as there is a cough or difficult breathing, sure signals of danger, which must be heeded. By observance of this law he has never had a death follow the administration of an anæsthetic and rarely has been obliged to administer hypodermic injections to maintain the heart's action. He emphatically protests against the advice sometimes given to patients to take deep and strong respirations, thus inflating the lungs with air, prior to the inhalation of an anæsthetic, far better is it to advise such inspirations after the cone is placed over the mouth and nose.

The use of medicated solutions, which formerly were so freely used for flushing wounds, have not been regarded as essential by the writer who rarely uses any of them if hot water is obtainable, which is only used to arrest oozing or to insure cleanliness. Irrigation was discontinued from no fear of poisoning, but on account of the impossibility of drying the parts, and failure to make this thorough, favors suppuration. The soft condition of the nails, the dyspepsia and loss of teeth, described by Prof. Albert of Viena, which he thought might be attributed to an extensive use of sublimate solutions has never been noticed, a brittleness of the nails and a fissured condition of the fingers of the surgeon and nurses has, however, been observed after the free use of such solutions.

Drainage has likewise been used less freely in incised wounds, and only those of absorbable material, when the flaps have been made through suspicious tissue. Retention of tubes or tents for sixty or twenty-four hour favors fistulous tracks, and prevents union by first intention. Dry dressings have always been preferred, and with gauzes freshly prepared, unless in cases where drainage is required. In either method they are not disturbed unless a persistent rise in temperature, 102° Fah. is noted; or an offensive odor accompanied by swelling and pain is detected. The wounds are closed with sterilized gut or silk, the latter preferred. The line of incision is protected with powdered iodoform and boracic acid, and six or eight layers of gauze covered with absorbent cotton, all held in place by a bandage. After which the patient is removed to his home or hospital, and a full dose of morphia completes the treatment.

What has been said in regard to immediate amputations, where a single limb requires removal, has been found to hold good in double amputation and would be recommended in cases requiring any more serious mutilation. On four different occasions the writer has been obliged to amputate both legs, above the knee in two cases; one recovery and one death in each class. The death in the first division ought not to be credited to the operation. The man, who had been injured whilst stealing his way from New York City at night, had his legs crushed by "the bumpers," requiring immediate amputation. He had progressed for ten days without a single discouraging symptom, when it was felt the patient could be assured of his ultimate recovery and was so told. From that moment he refused food; did everything in his power to irritate the wounds and in spite of artificial alimentation, died within a week from pyema.

With our improved methods of treatment the question of removal of limbs in double and triple amputations, succes-

sively or simultaneously, is not of much import, except as concerns the length of time necessary for the patient to be under the influence of anesthesia. If performed seriatim, the cutting and ligitation of arteries should be done quickly; the application of sutures made during recovery from the anesthetic. Such has been the experience of the writer. It has been the means of saving lives; of giving to employees painless stumps, to which could be readily applied an artificial leg or peg; of preventing shock; in some instances of cutting short its existence.

"Ad extremos morbos extrema remedia exquisite optima."

ADDRESS IN MEDICINE.*

S. W. LATTA, M. D., of Philadelphia.

If I needed any excuse for the departure I will make in my remarks on this occasion, or a precedent for not adhering to the strict letter of the By-Laws of this learned Society, I could find both in the language of my distinguished predecessor at Harrisburg one year ago when he said that "the spirit of the by- laws need not be violated by not literally portraying the progress of pathology and therapeutics during the past year." What I shall present, may, I trust, be of equal benefit to us all as members of the medical profession.

There are so many errors which have inadvertently, as it were, and insidiously, crept into the practice of medicine, that I propose, on this occasion, speaking of them somewhat at length and in detail.

The lamented ex-President of this Society, the late Professor David Hayes Agnew, our revered friend and the preceptor of many of us, once told the speaker that no physician was qualified to take up a special branch of his profession until after an experience of at least ten years in general practice. On this, as on every subject relating in any was to his profession, Dr. Agnew's views were sound, as being the exponents of a broad mind and the result of matured thought. Nothing has so great a tendency to broaden the mind and the man as the general practice of medicine. It makes him self-reliant, thoughtful, charitable, careful of the feelings of others.

The confidence reposed in him; the family secrets necessarily entrusted to him; the advice sought from him; the reverence paid to him; the anxious attention given to his opinions—all tend to broaden and deepen his character and fit him for any sphere of life.

Without the preliminary training thus acquired, the specialist is too apt to be narrow in his views. He has to do with but one small part of the many-sided whole which constitutes the practice of medicine.

While we admit the necessity, nay, the desirability of specialities and specialists, we deplore the tendency of young graduates to rush into them without the experience only to be gained in the general practice of the profession. The relation between general conditions and special diseases being so intimate as regards cause and effect, the cure of the special naturally following the alleviation of the general condition, makes it important that the specialist should have served his apprenticeship as a general practitioner before taking up the burdens of the special branch to which he may have a predilection, to insure his ultimate success in his chosen specialty

A specialist who has never engaged in general practice lacks experience in the general systematic disturbances which may account for the special condition, and of which it is but one, and it may be the least, important result.

With some, so marked is this lack of, shall we say, experience? that it is quite common for them to relegate the patient to the general practitioner with a query as to what constitutes the general ailment, if so be a general ailment is recognized.

Again, specialists who have not this general knowledge are prone to see nothing but the special condition and entirely to overlook the more important

* Read before Pennsylvania State Medical Society, 1893.

matter of the general character of the disturbance.

The study of the action of drugs and experience in their application to diseased conditions, is the ultima Thule of every physician. This is the summit and perfection of our art. It is for this we are physicians. To minister to diseased bodies and minds; to aid their restoration to health are objects we seek in the practice of medicine, and if errors are committed in these, he who is guilty of them is not that successful practitioner which one and all seek to be.

The growing tendency for a great many years has been to entrust the preparation of all drugs to the pharmacist.

The physician sees his patient and writes his orders in the shape of a prescription which the druggist fills. Whether he accurately compounds the prescription or not, we have no means of knowing. That he makes serious mistakes, we sometimes learn to our infinite regret and sorrow. This custom has led to many errors, one, not the least, being the temptation to write long and intricate prescriptions wherein the action of the many ingredients must of necessity produce more or less antagonism, if not incompatability and entirely nullify the action sought.

There is before me as I write a prescription containing twenty-two ingredients! What a great man that physician must have been in the eyes of the unfortunate patient! That he had such a knowledge of the armametarium of his art, at his command as to be able to fire twenty-two barrels at once! And how grave the malady where such a powerful weapon was needed!!

The habit of substitution on the part of some pharmacists is a confirmed one. The first time it is doubtless practiced with hesitation, but habit makes bold, and while he may have the drug called for, in it may be an unopened package, the temptation possibly fostered by haste and convenience, leads him again to indulge it. The character and condition of the medicine prescribed are also unknown to the prescriber, and it frequently happens that inferior quality renders inert the physiological action intended.

These are good and valid reasons against the present mode of procedure, but there are others yet stronger. The other and better plan is for the physician to carry and dispense his own remedies. It is urged as an objection against this plan that it is beneath the dignity of a physician to dispense his own medicine. Nothing which insures to the benefit of suffering humanity can lessen our dignity. Besides our fathers did it; surely their dignity did not suffer in consequence. Truly, we were well endowed had we the dignity and influence enjoyed by our fore-fathers. Can anything which tends to make the physician more successful in curing disease be neglected by him?

Again, it is urged that the busy practitioner has not the time to dispense the drugs required for each of his many cases. Surely no one can be too busy to do what is best for his patients.

The practice of hurriedly giving attention to patients, or anything which fosters and encourages the habit, works to the detriment of the physician as well as the patient. Grave errors result therefrom. Mistakes in diagnosis are apt to creep in and consequent injury to patients, and it seems to me that whatever shall lead to a more careful and thorough investigation of each case must of necessity be for the benefit of both physician and patient; to the one, in the feeling of duty conscientiously and properly performed; to the other, in the beneficient action resultant upon the best medical application known to scientific medicine.

Again, in these days when medicines can be obtained from manufacturing chemists in such forms as to be easily carried and dispensed, it should be no great hardship for the physician to provide and dispense them.

Tablets, triturates, capsules, and pills occupy but small space, their cost is not great and by the use of them the benefits to patients are incalculable.

The dangers and drawbacks from polypharmacy, shot-gun prescribing, will be greatly lessened also, and the physiological action of the drugs more likely to be obtained, while the patient will run much less risk of being over-dosed, and cures will not result from carrying a prescription, unfilled, in the patient's pocket.

Further, the patient has his medicine before the physician has left his side and any dangers which might accrue from delay are avoided. Many long days of suffering may be prevented by promptly

giving remedies, which could not be accomplished if the patient had to await the sweet will and pleasure of the autocratic pharmacist, who may also be at some distance, in the country districts several miles.

Much expense is also saved to the family, with little cost to you, as the patient will be given only what will be needed until your next visit.

The physician also will be likely to exercise greater care in prescribing remedies if on each visit he is required to furnish that which will be needed until his return to the bedside of the patient, and if a change of remedies is indicated by change in symptom, he will be more likely to make such than if a partially used 8 oz. mixture stares him in the face as so often happens.

The sick room will not look like a drug shop on a small scale, with its array of mixtures, tinctures, pill-boxes, and what not, and the patient's friends will not feel that they are "long" on a quantity of drugs, literally drugs on the market on which there is but small chance to realize. The baneful practice of "renewing" a prescription by presenting the bottle with its numbered label, without orders from the physician, would also be a thing of the past.

Office patients would be more likely to pay cash, as there would be no further expense entailed until the next visit to your office, and while they, under the present plan, may have to save their money to pay the druggist, this will now be paid the doctor, and patients, I refer to those in poorer circumstances, will feel when the physician gives them their medicine, that they have received something which calls for immediate payment. To this fact is largely due the success of our Homœopathic friends among a certain class.

The prescribing largely of the compressed tablets, capsules and such like pharmaceutical product also furnishes the medicine in a more convenient and palatable form, and will in time do away with the great dread of disagreeable nostrums with which our revered forefathers nauseated their long-suffering clients.

The universal practice of prescription writing, is in my opinion largely answerable for the large increase in counter-prescribing and in the consumption of patent medicines. The patient is aware that if he consults a physician he will send him to a drug store for his medicine. He thinks to save the Doctor's fee and goes direct to the druggist for advice and medicine, the former of which will cost him nothing.

The almost universal practice of charlatans and quacks in advertising free consultations with charges for medicine only is one of the leading factors in obtaining patients.

If by dispensing our own medicines we can lessen these two growing evils, is it not our duty to do so? Do not understand me to propose free consultations—far from it; but only to urge the desirability of combining the consultation and medicine fee in one.

Another growing evil of our day is the increased attendance upon free dispensaries where both advice and frequently medicines are given gratis. People well able to pay are constant patrons, and many cases really requiring no treatment constantly infest these places because it costs them nothing. All beneficiaries of these admirable charities should be required to furnish proper certificates before being received and treated as such.

The lamentable ignorance of many practitioners regarding hygienic laws is to be regretted. I take it to be the duty of every physician when called upon to attend a case of either zymotic or telluric disease, to use every effort to ascertain the cause. It goes without saying that a cause must exist. Every physician should be a plumber in theory,—should understand the best means of disposing of offal and drainage; should be *au fait* on the subject of ventilation; should be an expert in the matter of proper food supply and the way to detect adulterations or harmful changes in its composition. He should know what constitutes a proper water supply; the dangers of water contamination and be prepared to suggest the remedies.

The proper disinfectation of houses and rooms occupied by cases of contagious diseases should be as familiar to him as the prescribing of quinine for malarial fevers; and yet how many of us give the proper attention to these most important matters. As physicians we are responsible not only for the cure of diseases but

also for their prevention, and unless we are good scientific hygienists we will miserably fail in successfully performing this part of our work. The time may come when we will be employed, as is the physician in China, not to cure disease but to prevent it. The growing tendency of the age is toward preventive medicines, and woe betide that physician who is ignorant of the laws of health and how to preserve it!

We daily hear of learned members of our profession who are successful in "breaking up" a threatened attack of typhoid fever or some other equally serious complaint. They tell the patient that they have been sent for just in the nick of time, else he had doubtless died of the seizure. However, that he is safe now as they feel sure they can break up the threatened attack. How ridiculous and how prone is such conduct to bring reproach upon our noble profession. These record breakers should be frowned down and the people given to understand that we do not all countenance fraud.

I deplore the growing tendency to deceive the laity by giving them to understand their condition is serious, when it is not, and that marvelous cures have been brought about when nothing serious ailed the patient.

Untoward results may, and doubtless do, result from such unnecessary alarms. I cannot silently approve of or be a party to such deliberate falsifying, which is done for the purpose of gaining self-glory, and believe it to be as bad or worse than publicly advertising for patients. It can only be done for notoriety, for the purpose of enlarging the clientele of the doer, but done by false representations. I believe it proper and right candidly to state to the intelligent patient the true condition of his physical state, except in rare contingencies. I also believe such candor often aids the cure; and I deprecate any deceit, particularly that which may lead to the continued illness or a prolongation of the disability of a patient, by reason of premediated misstatement of facts.

The object I had in view in the foregoing remarks, which may seem severe, was the desire to elevate to a higher plane the practice of medicine, to give publicity to my condemnation of what seem to me improper and unbecoming practices;—to express my sense of the duties devolving upon us as physicians; to accept and adopt all means looking toward the successful practice of our art; to urge the necessity of doing anything and everything which may in the slightest degree assist us in becoming more successful in combating disease and relieving the many ills to which poor humanity is the heir.

Let us, therefore, be enthusiastic but honest practitioners, truthful to our patients, true to ourselves, and diligent in fulfilling the grave responsibilities which rest upon us as conservators of the public health.

ADDRESS IN OBSTETRICS.*

THOS. D. DUNN, M. D., West Chester.

A resolution adopted by this Society in 1871 provides for an annual address in obstetrics, reviewing the progress during the preceding year of this branch and collateral sciences.

When your President extended this honor to me, I was ignorant of this by-law, and when it was first discovered, the difficulty of complying with the spirit and the letter of the law in the time allotted seemed well-nigh insurmountable; a hasty examination of previous addresses in obstetrics showed many deviations from this rule. This is not mentioned in a spirit of criticism, but to induce a charitable consideration of the present attempt.

The frequent publication of reviews of medical progress, annuals and compendiums, makes this work unnecessary. To review the contributions to obstetrical literature is no easy task; and from the vast amount of material it is difficult or impossible to always decide which is really valuable, and which time and the light of experience will prove worthless. Old things that have long been weighed in the balance and found wanting are frequently resuscitated by new aspirants to fame, clothed in new form and presented as novelties. Occasionally, how-

* Read before Penn. State Medical Society, 1893.

ever, one that has been relegated to oblivion is brought forward and under the light of a new age, and under new conditions proves to be golden grain and not chaff. The time alloted will scarcely permit the mention of all the good things that have been written, but it affords an opportunity to refer to a few important subjects.

During the past year considerable attention has been given to the use of anesthetics in labor.

No argument would seem necessary at this time to justify their use to relieve the mental and physical suffering of childbirth, were there not a goodly number of physicians who do not use them at all, or only in instrumental deliveries. Within a year I have heard a general practitioner who has had a fair practice, and who is a member of the State and National Societies, announce to a body of medical men that he never used anesthetics, even in forceps delivery.

But the prejudice of the past has happily largely disappeared, and the superstition that once existed, that labor being a physiological process, and the suffering therefore natural, should not be interfered with, has fortunately been abandoned.

Whenever there is pain, whether the result of physiological functions, diseased conditions or surgical procedures, humanity demands its relief. The aversion to the use of anesthetics which is often caused by fear of ill-effects is usually easily removed, though this fear is too frequently encouraged by the timid and unskillful attendant. It is true anesthetics sometimes have a depressing effect and may increase the tendency to postpartum hemorrhage, but these untoward results depend largely on the manner in which they are employed. In surgical operations, if profound anesthesia is induced, the tendency to both primary and secondary hemorrhage is increased, and there may be marked disturbance of respiration and circulation. These dangers exist also in the use of anesthetics in labor, but they should not be condemned in the latter class of cases and approved in the former. That they are improperly given by some should not interfere with their administration by the skillful. Except in cases of version, abdominal section, symphysiotomy, and rare forceps deliveries, complete anesthesia is seldom required.

For their intelligent use it is necessary to recall for a moment a few facts in the physiology of labor. The nervous supply of the uterus is such that its rythmical contractions are carried on independent of volition—the source of this supply being the ganglionic centers of the spinal cord. Their action may, however, be inhibited by the higher cerebral centers, as, for example, in the suspension or irregularity of uterine pains as the result of fright, the sudden arrival of an unwelcome medical attendant or nurse, shock or exhaustion from prolonged suffering. During the nervous excitement of conscious pain, uterine contraction is often feeble or may cease altogether, and it is not uncommon to see dilation arrested for hours.

Who has not repeatedly seen a few whiffs of chloroform quiet this excitement and strong regular uterine contraction follow and labor be brought to a speedy and successful termination? Here the cerebral excitement inhibits the nervous mechanism of uterine contractions, and this excitement the anesthetic removes. The spinal centres are then free to restore the rhythmical contraction of the uterus.

The relaxation of an anesthetic also lessens the tendency to injury of cervix and perineum. By relieving the violence of the suffering by partial anesthesia, the voluntary assistance of the mother is under the control of the physician—a condition necessary to the successful management of delivery.

Dr. Edward P. Davis, in *Philadelphia Polyclinic* for April, in an article on "Anesthetics in the Treatment of Labor," thus strongly states their advantages:

"In prolonged and difficult labor, some of the greatest dangers which threaten the mother and child may be lessened by the skillful use of anesthetics.

"The element of shock may be thus lessened or prevented. Exhaustion of the uterine muscles, the greatest predisposition to hemorrhage, is far less frequent when anesthetics are employed. Injurious pressure upon the child less often occurs when the forces of labor are regulated and controlled by partial anesthesia. The facility afforded in diagnosis and operation to the physician from the use of an anes-

thetic is a fact too familiar to require discussion."

A comparative study of anesthetic agents which are employed in parturition has been made by Chaigneau (*Journal de Medicine de Paris*, Apr. 19, 1892). He believes antipyrin has given but moderate results. Chloral is often uncertain, unless used in large doses, which frequently cause gastro-intestinal irritation. Lord (*Omaha Clinic*, Oct. '92) advises it in all cases where an anesthetic is required, except where there is great cardiac weakness. It frequently relieves the teasing pains in the first stage of labor, and prevents the exhaustion of the mother.

Cocaine has been employed successfully by Jaenne in 5 per cent. solution applied by a tampon to cervix and vaginal cul de sac. Doléris uses a 4 per cent. cocaine ointment with much advantage. Auvard recommends the injection of 15 to 20 minims of a 5 per cent. solution of cocaine in each *labium majus* a few minutes before delivery, which greatly lessens the suffering of this stage.

Chloroform, as stated by Parish in his review (Sajous, *Annual of the Universal Medical Sciences*, 1892), seems to be the favorite anesthetic of most writers, and he expresses his surprise, in view of its many advantages and few dangers, that it is not used more frequently. He believes the condition of syncope is the only contra-indication for its use.

Acute or chronic disease of lungs, heart or kidneys ought not to deter the careful physician from its judicious employment. Under the prudent use of chloroform the rapid, feeble, nervous pulse of the person in labor will become steady and full. It is indicated in cases where the pains are severe and badly borne, where the uterine contractions are irregular, where there is marked rigidity of the cervix and firm resistance of the perineum.

Its tendency is to lessen rather than increase the danger of post-partum hemorrhage—a direct result of diminishing uterine exhaustion, and it has been my experience, as well as that of others, that it is not uncommon to see what was considered a complicated labor speedily converted into a normal one by its use.

For my part I resort to partial anesthesia by chloroform in a majority of my parturient cases, and I have yet to see any ill-effects from its use. Our duty in a mother's hour of trouble and peril is not alone confined to safe delivery of the child—human suffering demands relief.

In operative procedures, as in difficult forceps deliveries, post-partum hemorrhage where interference is required, abdominal section and symphysiotomy, ether is doubtlessly safer and better. A careful discrimination should be made between ether and chloroform in cases requiring complete anesthesia.

The past year will long be remembered in the history of obstetrics on accout of the introduction of symphysiotomy in America. At the last meeting of the American Gynecogical Society, Dr. Harris, of Philadelphia, read a paper calling the attention of the physicians of this country to the marvelous results of this operation in Italy. This article made such an impression that the operation became at once popular, and many successful cases have been reported. A brief history of the operation may not be out of place here. It was first performed in France on the wife of a French soldier by Jean Rene Sigault in 1777. It received a favorable consideration in Italy, but was rejected in Germany and England.

From this period to 1858, Dr. Harris collected seventy cases, with a death rate to mothers of 37 per cent., and to children of 67 per cent. In spite of this high mortality to both mothers and children, Professor Morrisani, of Naples, revived the operation, and from 1866 to 1880 he and other Italian obstetricians performed the operation fifty times, reducing the mortality of mothers to 20 per cent. and children to 18 per cent. From 1881 to 1885 fifty-two cases were operated upon, with the fearful mortality to mothers of 44 per cent., but the loss to children was reduced to 13.5 per cent. The genius of Morrisani was not doubted by these discouraging figures. He worked quietly and persistently in perfecting the operation under antiseptic management, and in Naples, from January, 1886 to January, 1892, it was performed in twenty-eight cases with the lost of but one mother (from causes not traumatic) and three children.

During this period the success of the Sänger Cæsarian method in other countries caused it to supplant symphysiotomy, but the knowledge of the good work done in Naples, after January 1, 1892, spread to

France, Germany, Russia, Ireland and America. Since then we have been on the crest of a symthysiotomy wave. Repeatedly had Morrisani written on the subject previous to this, but he preached to deaf ears outside of Italy; he must now, however, realize the highest fulfilment of his hopes. During 1892 the operation was performed at least 40 times with the loss of but one mother.

The following is the list of the American operators in their chronological order: Jewett, of Brooklyn, Sept. 30; Hirst, of Philadelphia, Oct. 3; Broomall, of Philadelphia; Michael, of Baltimore; Noble, of Philadelphia; Springle, of Montreal; McKennan, of Paris, Ill.; Garrigues, of New York; Duff, of Pittsburgh; Lusk, Coe and Grands, of New York.

Thus, since Sept. 29, 1892, the operation has been performed 11 times in the United States and once in Canada, saving all the mothers and nine children.

During the year 1892 (*Annales de Gynecologie et Obstetrique*, Jan., 1893), Pinard performed symphysiotomy 8 times, and his associates in the Baudelocque Clinic of Paris 5 times—13 cases in all. All the women recovered and the pelvis in each instance united solidly, and they made perfect recoveries in every particular, while only three of the children perished. It is the consensus of opinion that the operation should be limited to flat pelves with a conjugate diameter between 2¾ and 3½ inches, *i. e.*, a pelvis not so highly contracted that a living fetus cannot be delivered after the operation by version, or, preferably, the forceps. If the diameter be less than 2¾ inches, Cæsarian section should be selected, and version and the judicious use of forceps resorted to when between 3½ inches and the normal conjugate diameter.

Careful pelvimetry before labor, and the estimation of the size of the child's head *in utero* in its relation to the pelvis, will enable the obstetrician to make up his mind as to the course of labor, and decide what operation ought to be elected in each individual case to save maternal and fetal exhaustion.

Leopold (*Centrallblatt fur Gynakologie*, No. 30, '92) gives the following directions for the operation:

"The mother is placed upon a table with buttocks projecting. Two assistants hold the legs, slightly separated, with one hand below the knee, while the other presses the trochanters together. An incision is made through the skin from the upper border of the sypmphysis to 1 cm. above the clitoris. The soft parts are separated down to the joint; the insertion of the recti muscles is transversely divided only so far that the left index finger may be introduced behind the symphysis. The finger is inserted to the ligamentum arcuatum inferior and the joint separated by a blunt-pointed bistoury. The pubic bones immediately separate to 3 cm., and by careful separation of the knees and transmitted pressure on the trochanters to 7 cm., at any rate, so far apart that the large head immediately enters the superior strait and is easily and rapidly delivered by high forceps operation. The assistants immediately press the mons veneris so tightly together that the pubic bones touch. They are then united by silver wire sutures or strong silk along the soft parts and the wound closed. A strong and very broad binder, provided with buckles, holds the pelvis together for the next three weeks and is daily tightened. It is not necessary to separate the ligamentum arcuatum, nor, indeed, to cut through the entire symphysis, as after half or three-quarters separation the upper ends are 3 cms. apart. In pelves, in which, following rachitis the direction of the pubic symphysis and the upper sacral vertebra converge upward, also where the principal hindrance to the entrance of the head is the projection inward of the upper segment of the symphysis, it is necessary to open only so wide as the individual case demands."

The future of symphysiotomy is full of hope. Its advantages are not confined alone to the great reduction in mortality of mother and child. The profession is becoming painfully aware of the army of idiots, epileptics and cranks, the result of injuries to the brain of prolonged and difficult forceps deliveries. Cerebral injuries are almost as frequent after version in the extraction of the head.

Dr. J. M. Taylor (*Annals of Gynecology and Pediatry*, 1892) has called attention to the importance of this subject in an "Inquiry as to the Causes Producing Cerebral Injuries in the New Born." Embryotomy has ceased to be a justfiable procedure on a living child. The

induction of premature labor in cases of contracted pelvis must be greatly restricted. Even with strict antisepsis, statistics show for this operation a death rate to mothers of 5.3 per cent., and of 45.3 per cent. to infants. This operation can therefore stand no comparison with symphysiotomy, which ought to have practically no mortality to mothers, and has less than 10 per cent. to children.

Present indications are that the integrity of the symphysis pubis is completely restored in three or four weeks after the operation. The remote effects of injury to the birth-canal in symphysiotomy are much less than in version and difficult forceps deliveries. The brilliant results of the Porro and Sanger Cæsarian operations have been confined to the most skillful hands in the large cities and hospital clinics. Their advantages have thus been denied the majority of these unfortunate cases. In choice between section and embryotomy the vast majority of rural practitioners will choose the latter. The simplicity and ease with which symphysiotomy is performed will extend its advantages to villages and country districts. Thus many women and children will be saved by physicians who would not undertake a section.

For these results one man and one country deserve all praise—Morrisani, of Italy, gave us symphysiotomy.

So much has been said and written during the past ten years in favor of antiseptic midwifery, it would seem unnecessary to introduce the subject here, but as long as there is puerperal infection in private and hospital practice, and there are physicians who fail to give their patients the protection of rational antisepsis, this war against sepsis must go on. There must be no indifference in the matter, and even at the risk of reaching the point of "mental saturation" to many, no argument should be withheld while any man refuses to be convinced.

In hospital practice, since the introduction of antisepsis, there has invariably been an enormous decrease in morbidity and mortality.

Dr. Joseph Price has had over 1200 cases of labor at Preston Retreat, Philadelphia without a death from any cause. Before delivery the patient is thoroughly washed with soap and water and given a single 1–2000 bichloride vaginal douche, which is repeated once on delivery of placenta.

Garrigues (*Med. News,* Nov. 26, '92) gives the following results of the new treatment in the New York Maternity Hospital:

During the nine years previous to its introduction (1875–1883), 3504 women were confined, 146 of whom died, *i. e.*, 4.17 per cent., and of these 17 or 17.17 per cent. succumbed to sepsis. During the last month of this period the total mortality reached even 20 per cent., and that from infection 15.69. During the first three months after the change—from Oct. 1, 1883 to Jan. 1, 1884—there were 102 deliveries without a single death, and from Jan. 1 1884 to Jan. 1, 1891, 3170 deliveries with 30 deaths, 7 cases succumbing to sepsis. Thus the total mortality has been reduced to between one-fourth and one-fifth of what it formerly was, it now being less than 1 per cent., and that from sepsis less than one-fifth per cent.

The records of the Sloane Maternity (Dr. Jas. W. McLane, *Am. Jour. Obstet.*, 1891) show that in 1000 cases, 6 cases were lost and only 1 from sepsis, or one-tenth of 1 per cent.

Braun (Herzfeld, *Central. f. Gynäk*, 1890), at the Vienna Clinic, had 1004 consecutive cases with only 2 deaths. Many other hospital statistics might be cited, showing equally satisfactory results.

The value of internal disinfection before delivery has been debated much in the past few years, especially in Germany. Some have carried antiseptic measures to such extremes that they become burdensome and even injurious.

Thirty deaths from poisoning have been reported, the result of the immoderate use of bichloride injections. It is natural that this announcement should be followed by a reaction against internal disinfection.

One French writer (quoted by Garrigues, *loc. cit.*) went so far in his antiseptic zeal as to require bichloride injections (1 to 2000) twice a day, beginning four weeks before delivery. The week previous to confinement they were given every other day and the vagina tamponed with iodoform gauze. The injections were also continued after delivery.

Mermann (*Central f. Gynäk.*, 1892) has had 700 cases with but one death,

and that from rupture of the uterus. He conducts labors without internal disinfection, but his practice is to make no internal examination in uncomplicated cases.

Leopold, Glöekner, Keller and others think that internal disinfection before delivery increases both mortality and morbidity.

Frommell (*Deut. Med. Woch.*, 1892, No. 10), on the other hand, believes in an internal injection of bichloride as a prophylaxis of puerperal disease. He finds no increase of sepsis from frequent examinations by students in his clinic when this precaution is taken. When he relied on external disinfection, puerperal infection occurred.

Hoffmier (*Deut. Med. Woch.*, 1891) advocates the disinfection of the birth-canal before delivery, and shows from comparison of the statisties of Wurzburg clinic with those of others that it is not a source of danger to the mother, but, on the other hand, even with the examinations of students, it diminishes puerperal disease.

Steffeck (*Zeitschrift f. Geburt. Gynäkol.* Bund XX, Heft 2) has made a bacteriological study of the secretions of the vaginal canal in 29 healthy women before delivery. The secretions were examined, cultures made and both injected in animals. Twelve cases gave positive results, abscesses followed in seven, and in five general puerperal infection. The germ most frequently found was the staphylococcus pyogenus albus. He concludes that this germ, as well as streptococci, may cause puerperal infection which should be considered an auto-infection, and strongly urges the prophylactic douche before delivery.

Garrigues (*loc. cit.*) very pertinently denounces the extremes of these views, and advocates a single vaginal injection before delivery, to wash out germs and dirt.

Antiseptic treatment of puerperal women can be made both simple and effective. The patient should have a hot bath and the external genitals thoroughly washed and disinfected. There should be a single vaginal injection before delivery of simple boiled or borated water, or a solution of bichloride, 1 to 2000, or a 1 to 2 per cent. creolin solution. The physician and nurse should wash hands (also arms in case of section) thoroughly with the indispensible nail-brush, and disinfect with 1 to 2000 bichloride solution. If lubricants are used (which is seldom necessary), they should be aseptic. After the birth of the child, in normal cases, the vaginal tract should not be examined and disinfection is not required. If portions of placenta remain, they must be removed, and, as in cases of instrumental delivery or version, the birth canal and sometimes the uterus itself should be flushed with an antiseptic douche. Instruments should be boiled or rendered antiseptic by strong solutions.

Probably among the uncleanly, in private as well as in hospital practice, disinfection of napkins or pads would be safer.

The benefits of antisepsis in hospitals have been repeatedly demonstrated beyond all doubt. While there may be slight variation in detail, it is practically the same in all. Every woman, in private practice, about to become a mother, should be surrounded by the same safeguards the poorest and filthiest have in hospitals. Too frequently the woman who has all the comforts and skill money can secure, is not protected by the physician from the poison that lurks in the private dwelling. The treatment is simple and materials inexpensive, and it is a crime to receive compensation for our work, as well as a violation of the sacred though unwritten pledge of the physician, if these precautions are neglected.

In conclusion, I wish to add a few pertinent quotations from that classical essay on the Contagiousness of Puerperal Fever, by Dr. Oliver Wendell Holmes.

It was read before the Boston Society for Medical Improvement, and printed in the *New England Quarterly Journal of Medicine and Surgery* for April, 1843, reprinted with additions in 1855, and appears in his "Medical Essays." It should be read by every physician who enters the sacredness of the lying-in chamber.

"For my part I had rather rescue one mother from being poisoned by the attendant, than claim to have saved forty out of fifty patients to whom I had carried the disease.

"God forbid that any member of the profession, to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly or selfishly.

"Let the men who mould opinions look to it; if there is any voluntary blindness, any interested oversight, any culpable negligence, even, in such a matter, and the facts shall reach the public ear, the pestilence carrier of the lying-in chamber must look to God for pardon, for man will never forgive him."

I beg to offer to this Society the following preamble and resolution, which I sincerely hope may be adopted:

"WHEREAS, Experience, both in this country and abroad, shows that by strict antiseptic measures the mortality in lying-in hospital may be reduced to a minimum, and

"WHEREAS, Deaths due to child-birth are yet too common in private practice;

"*Resolved*, That, in the opinion of the Medical Society of the State of Pennsylvania, it is the duty of every physician practicing midwifery to, as far as possible, surround such cases in private practice with the same safeguards as are being used in hospitals."[1]

Short Articles Preferable in Live Medical Journals and Medical Societies.

If busy members of the profession realized how easy it is to make note of important features in important cases while engaged in their round of work, and then to arrive at conclusions regarding same, there would be more of it done, and as a result therefrom short, terse contributions might easily often be made to medical journals and to medical societies. An immense amount of time is often wasted by the writer in approaching his subject. Unnecessary side-issues are brought in and valuable points are frequently lost in a world of words. Too many men in preparing a paper feel that it is their duty to give the views of all who have preceeded them, and then in a labored way to present their own. Far better would it be if they would adopt the rule in their contributions of making one point at least, and making that point so distinct, definite and permanent as to enable one to hang his hat on it.

The chairman in the section on Diseases of Children of the New York Academy of Medicine, Dr. Wm. P. Northrup, recently (*N. Y. Med. Jl.*) sent to members of his section suggestions for the preparation of papers as follows:

1. "Hippocrates and Galen may be passed with slight notice, as they have been dead for some time and their opinions are somewhat obsolete.

2. Scratch out the formal introduction, and begin where the subject-matter really begins.

3. Condense the body of the paper.

4. End the paper where the subject-matter ends, making its action like that of the piston syringe—begin, spatter, stop."

Yes, let every contributor begin promptly. Let him spatter as little as possible and then stop promptly. Some philosopher once said that "he is a fortunate man who knows when to retire from the salon and the world." He might well have said: He also is a fortunate man who, when contributing an article to a medical journal or a medical society, knows how to begin and knows when to stop.—*Med. Mirror.*

A Peaceable Race.

The Japanese manner of settling quarrels is original. When one man has offended another, the injured party gives notice that he is angry by drawing in the sand before the door of the offender a circle with a straight line across it, indicating that his affection, which would have been eternal, has been cut in two. Friends of both parties then shut them up. They parley awhile, then pretend to be born again, prattle as little children, and finally as men become reconciled and embrace. Should one be refractory and refuse to be conciliated, he is ostracized by the community so effectually that he is soon brought to terms. It is just possible that our enlightened citizens might consider this method better than knock-down arguments and certainly much cheaper than going to law.—*Harper's Bazar.*

A Sure Preventive.

Bridget. "Phawt's t' privint me tellin' yure mother on yer, Tommy Barker, shtealin' caake loike a thafe?"

Tommy. "Honor, Bridget. Didn't you kmow there was honor among thieves?—*Harper's Weekly.*

[1] This preamble and resolutions are nearly identical with those presented by Dr. Henry J. Garrigues, at the section on Obstetrics and Gynecology of the New York Academy of Medicine Oct. 27, 1892, and unanimously adopted.

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SATURDAY, SEPTEMBER 16TH, 1893.

EDITORIAL.

INJUDICIOUS HOUSE QUARANTINE.

That there has been advance in medicine, surgery and hygiene in recent years can not be denied. The advance has on the whole been direct and continuous, but at times it has been interrupted, and sometimes there has been retrogression. This is especially true of the present practice, in the supposed interest of public sanitation, of domestic quarantine of houses and their occupants on account of the presence of one or more cases of diphtheria or scarlet fever or similar disease. Aside from its enforcement in the over-crowded "poor districts" of great cities, the practice is often ill-judged, often worse than useless, sometimes injurious and not rarely cruel and barbarous.

There seems to be a growing tendency to exaggerate the danger of contagion in such cases. The risk of infection from personal contact is very small. That nurses and attendants on such cases rarely acquire the disease is a matter of history. Unless the association is close and continuous, as by occupying the same room or bed, with absence of ventilation, it is rarely seen. The evidence that these diseases are conveyed by fomites or carried by attendants on their clothing or otherwise to outsiders is not such as to satisfy scientific requirements. Anyone of much personal experience must have seen how seldom these diseases spread, even to other members of the family, if care in separation and ventilation is insisted on, and personally we have never known a case where the physician carried them from his patient to other families. It appears that the present notion of the communicability of these diseases, which seems to obtain with many physicians, does not come from study and reflection upon past experience, but from theoretical fancies about pathogenic germs and *a priori* generalizations, reasoning from the microscope and culture medium to the sick-bed instead of the reverse.

The tendency seems to be developing into something like a sanitary panic, and the consequences cannot but be deplorable.

The health authorities in many states have been empowered by law to require physicians to report all contagious diseases to local boards of health, and penalties are attached for neglecting to make such report, and this report is required immediately, often before a correct diagnosis can possibly be made. This is a direct bid to report as a contagious case every sore throat, red rash, or fever. Such a course may be forced upon the honest practitioner as a precaution against annoying prosecutions, and it may be gladly resorted to by the less scrupulous as an advantageous business operation, for every sickness reported as contagious and cured redounds to the credit of the attending physician, and deaths are condoned by the name of the disease. That the reporting of these diseases to local boards of health might be of some use in enabling the cause of infection to be located we do not deny, but we feel like protesting against the practice of sending a so-called health officer—generally a police officer in buttons—to visit the houses where such cases are reported and placard them as pest houses, giving orders that no one shall be admitted, forbidding the family from going out for business, health or pleasure, and giving instructions as to the sanitation of such houses. This is absolutely unnecessary and cruel. It is barbarous to the sick, and their relatives and friends, and impertinent and discourteous to the attending physician. It causes great and needless fright to the families and alarm to the neighborhood, has a tendency to aggravate the disease in the sick, and renders other members of the family more likely to contract it from the depressing effect of fear. The practical imprisonment of all the residents of the house, cutting them off from exercise in the open air and from all the cheerful associations of friends, is an encroachment on personal rights which nothing but the extremist could justify. Its tendency is to cultivate in the community a feeling of timidity, cowardice and selfishness, which is to be deprecated, and it indirectly teaches the profession and the people to look for the causes of these diseases where they do not exist. The sewer inlets, cess-pools, kitchen drains and foul, close cellars are to be shunned—not unfortunate fellow citizens.

Contagia differ in their nature. It is fairly well proven that those of cholera and typhoid fever are respectively distinct and specific germs which are ingested in contaminated food and drink. Here the alimentary tract is to be guarded. Those of diphtheria and scarlet fever seem toarise from accumulated animal or vegetable matter in process of decay, favored by lack of light and by still air, and they commonly effect their contact with persons by germs floating in the air. If the air is in rapid motion they are blown away and become harmless. Here cleanliness and ventilation are paramount. These are quite different from the contagium of small-pox. This is personal, its habitat is man, and possibly the cow. No account of cleanliness in ourselves and our surroundings is of avail against this disease, and it may unquestionably be carried by fomites. But it is effectually prevented by vaccination and that is our only safe reliance, not house-quarantine which is necessarily uncertain. In guarding the community from contagious diseases we must not forget the natural history of the particular contagion in question.

Cholera is exotic, and its germs may be excluded by certain measures of national quarantine, but, when once imported, the food and drink are the things to be guarded, not persons. Home quarantining of individuals will not effect so much. Scarlet fever, diphtheria and typhoid fever are indigenous. These diseases will always develop when the conditions are favorable. Here the essentials are cleanliness, sun light and ventilation rather than house quarantine.

It is not wise to whip the stream to catch pigeons nor to beat the bush for trout. Before we press measures of sanitation that are grievous and burdensome to the community, let us at least be sure that we are right. Let us guard ourselves and the community from panic, and by no means become victims of sanitary hysteria.

TRANSLATIONS.

APPENDICITIS AND THEIR COMPLICATIONS FROM A SURGICAL STANDPOINT.*

The author, K. G. Lennander, reports 34 operative cases which were operated upon by him and his assistants between the fall of 1888 and summer of 1892. There was but one death which took place 5 weeks after the operation; cause pyæmia, caused by a small gangrenous portion of the intestine which had been overlooked during the operation. In 3 cases laparotomy with extirpation of the vermiform appendix was performed, in which diffuse peritonitis existed. In three other patients suffering from appendicitis, there were found 2 or more incapsulated intra peritoneal abscesses which were opened and drained, in only 2 of these was it possible to remove the vermiform appendix; of these 3 it was found necessary to make incisions through the vaginal vault and the colon. In 12 cases abscesses were found in the iliac fossa and in the lumbar region, an opening was made; 3 times extirpation of the appendix. Of the 9 remaining 3 have had returns and there was 1 death, which has been reported at the beginning. In 7 cases laparotomy and amputation of the ulcerated and gangrenous appendix; operation performed 40 to 60 hours after the begining of the attack, with the exception of 2, in which the attack had lasted 4 days in one and in the other 9 days.

Pelvic abscesses were present in three cases, one having discharged through the vagina and two through the large intestine. Amputation of the vermiform appendix was performed five times during the free intervals. Chronic appendicitis was diagnosed in one case and operation revealed an abscess of the appendix, while the adhesions between the ilio cæcal and the anterior wall of the abdomen were dense, these were released during the operation. As far as the author has been able to follow his cases the patients are all well; three still remaining under observation.

During this time two patients died of gangrenous appendicitis who had refused operation; one had an inoperable carcinoma at the head of the colon, and the other was supposed to be suffering from a perforating ulcer of the stomach, and this presumably giving rise to the existing perintonitis.

Etiologically the author speaks first of foreign bodies or fecal calculi, the latter according to his idea forming in the appendix (not in the cæcum as Talamon teaches); further he believes in the possibility of a retention of the secretions, aided by the swelling of the mucous membrane and particularly assisted by a bend or constriction of the bowel. The author has observed this in one case in which he operated and later was able to palpate it in two cases before the operation.

The primary stercoral typhlitis was observed by the author in several cases and is there inclined to take the opposite view of Sahli.

Severe repeated attacks of appendicitis in which the pathological changes have been entirely confined to the vermiform process, and suppurative peritonitis in which there were only catarrhal changes of an unperforated vermiform appendix were also seen by the author. Lennander prefers the rectal amd vaginal examination. He has in several cases found the difference in temperature above the normal between the axillary and the rectal methods, which Madalung has found to be pathognomonic of suppuration in the

*Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

lower portion of the abdomen or the pelvis. Lannander does not operate during the interval between the attacks, only at the express wish of the patient. He then opens down, releases all the adhesions which seems to him to be of pathological origin, and then invaginates the stump into the cæcum. If diffuse peritonitis is present a section is unavoidable, indeed strictly indicated; if the pus formed has become incapsulated he tries, if possible, to avoid opening into the free abdominal cavity and prefers to drain and with the aid of antiseptics feels certain that this method is less dangerous than to allow an unopened, undrained pus pocket to remain in the pelvic cavity. His incisions are usually in the median line or latterly. If the latter he directs his incision along the motor nerve in order to avoid hernia.

During the operation the author uses a warm solution of sodium chloride (sometimes twenty to thirty litres). If at all possible the appendix is removed and generally no intestinal suture is made, but closes the opening by the application of Peans forceps which are left in the wound, drainage of iodoform gauze is used between the loops of small intestines, Keiths glass drain is placed. The accumulative fluid is aspirated during the twenty-four hours, once in three hours, or oftener if necessary. Narcosis, at first chloroform by drops and later ether. The after treatment consists in small doses of morphia for the existing pain. To avoid symptoms of ileus the stomach and intestines are washed out; nourishment is given as early as possible and in rapidly increasing doses. If necessary warm enamata (500 to 600 g.) is given to check the thirst, once or twice daily.

The continuance of even slight symptoms of ileus is an indication, to the mind of the author, of more abscess or of fecal accumulations. As a rational treatment in cases of relapses of peri typhlitis Lennander recommends careful massage but only in the doctor's hands; this may also be the best method by which he will be able to gain thorough knowledge of the anatomical conditions present.—*Upsala Läkarenfören.*

ABSTRACTS.

CLINICAL THERMOMETERS.

The following abstract from the Report (1892-93) of the Managers of the Observatory of Yale University, is of material interest to the profession and will warn those physicians who put their trust in instruments of precision:

It continues to be true that only a small percentage of the instruments sold are sent to us for certification. It is presumably true, also, that those which are sent here for certification, by the manufacturers, are carefully selected, and, therefore, far more reliable than the avarage of those sold without certification. Nevertheless we are sometimes compelled to reject 25, 50 and even 75 per cent. of those sent us. As a rule, these are not rejected without receiving double the care and time required by the large majority of those to which certificates are accorded.

When there is taken into account the large percentage which the cost of certification adds to the manufacturer's prices, it is not to be wondered at that when he has succeeded in continuously producing, for a season, instruments with few and uniform corrections, he should point to these conditions as justifying his customers in accepting his instruments without other certification than his own. In those cases of this sort which have come under our observation, we have noticed that apparently the workman, when he no longer has occasion to expect his work to be traversed by a disinterested authority, soon relaxes his efforts at an accuracy which is hardly yet fully appreciated by the ultimate consumer, and his instruments, when they come to us from his customers, are not quite up to the standard maintained when he was continuously, or at short intervals, submitting them to such test: possibly he is not making due allowance for his changing standards.

It may not be out of place to again invite the attention of our puplic to some points in the construction of registering clinical thermometers, which are frequently overlooked by makers and users of these instruments.

In those forms where the index is a short column of mercury—one-third to one-half an inch long—separated from the rest of the mercury by a small bubble of air, the index is often lost by being thrown down into the bulb, the bubble escaping into the attenuated atmosphere of the tube, and when the index is restored the separating bubble is not likely to be of the same dimentions, and the temperature indications will not be the same as with the former bubble. The difference in the lengths of the tube occupied by the old and new bubbles will account, approximately for the differences in the readings. The bubble should always be as small as is consistent with its function of separating the columns of mercury. The tube should extend sufficiently beyond the maximum readings required, that the compressed atmosphere at the top of the tube may not force back the index, when the support of the mercury in the bulb is withdrawn by cooling.

In those forms where the "Indestructible index" is maintained by a "trap" near the bulb, the various constructions of this trap may, at certain points, cause the index to drop irregularly when the mercury below the trap has contracted, or may occasion a motion of the index by jumps: in fact in most of the reliable instruments of this form, it is merely a question of the number of jumps taken by the index in rising one degree;—most of those in which the index rises perfectly smoothly and without jumps, will justify the suspicion that the index will drop, as soon as the mercury in the bulb contracts from the trap. While the index is rising freely the motion may appear continuous, but when the index is within a degree or two of coming to rest and rising slowly, the jumps may, usually, easily be counted. Our recent practice has been that, when these jumps average 0°.1 or less, and the readings repeat themselves, throughout, within the prescribed limit of accuracy, the usual certificate is given: if the jumps avarage more than 0°.1 and less than $\frac{1}{5}$°,—the readings repeating themselves as before, we modify the certificate by making the limit of accuracy "0°.2" on the same certificate form: and when the jumps average more than $\frac{1}{5}$°, we give no certificate. The process of producing the trap leaves its walls in a somewhat unstable condition, so that moderate concussions may cause particles of glass to separate, which particles, acting as a plug, may temporarily sustain the index, which, when the plug is dislodged may drop. The contraction here is so small, and the particles of glass so fine, that it is not always easy to detect them. The same dropping of the index may be due to the varying effect of air in the trap.

One of Bismarck's Habits.

Once when Bismarck was a cavalry officer he was standing with some other officers on a bridge over a lake. As he was about to give an order his groom, Hildebrand, rode one of the horses to water close by the bridge. Suddenly the horse lost footing, and Hildebrand, clinging to the animal disappeared with it in the water. Before the other officers could collect their senses Bismarck had cast off his sword and his uniform and had thrown himself in the lake to save his servant. By good fortune he seized him, but the man clung to him so closely in his death agony that he had to dive before he could loose himself from him. Bismarck rose to the surface, raising his servant with him, and brought him safe to land in an unconscious condition. The next day the servant was as well as ever. But the little town that had wittnessed the brave rescue was in great commotion. They petitioned the superintendent, who obtained for the young officers the medallion "for rescue from danger." And now on great occasions, the well known Prussian safety medal may be seen beside the proudest stars in Christendom on the breast of the famous creator of united Germany. Bismarck, it is said, is prouder of his first medal than of all the rest put together. One day in the plenitude of Bismarck's power a noble minister approached the premier, and with a tinge of satire asked him the meaning of this modest decoration. He at once replied: "I am in the habit sometimes of saving life." The diplomatist lowered his eyes before the look which accompanied Bismarck's lightly spoken words—*Chicago Herald.*

THE LIBRARY TABLE.

BOOK REVIEWS.

An American Text Book of Surgery for Practitioners and Students. Edited by William W. Keen, M. D., and J. William White, M. D. Pp. 1209. Philadelphia: W. B. Saunders, 1892.

This volume represents the work of thirteen American Surgeons, all well known professors in as many as twelve medical schools of this country.

One great objection to this work is the fact that its articles remain unsigned; yet those familiar with the recent contributions of a number of these authors to the medical press cannot help but be impressed how closely they resemble the text, in fact some of them tally line for line with a number of reprints distributed to the profession.

"As may be expected," says Mr. Frederick Treves, of London, in his review of this work, "the quality of the different articles varies considerably, and the fullness with which the individual subjects are discussed is not to be measured by one standard. Undue prominence has been given to certain surgical matters, while others of less immediate interest, but of no less importance, receive too scanty a treatment."

The book opens with an article on Surgical Bacteriology which, while interesting to most readers, is of little use to the practicing surgeon or physician. It is not sufficiently comprehensive and thorough. For instance, the text states that dry heat of 212°F. will in 1½ hours kill bacteria. This would be misleading to the ordinary medical reader as it implies that dry heat 212° F. will produce sterility, whereas, should the mass contain spores, which fact no practitioner can determine, the spores would remain in full vigor and reproduce this kind when introduced into a favorable soil. Again in speaking of mercurial chloride: Koch is quoted to the effect that corrosive sublimate 1 to 1,000, destroys the most powerful organisms in a few minutes. This in the abstract may be correct; however, it will not do for practical surgery where albumins are generally present. This was long ago demonstrated by Professor La Place and others; the fact being that albumen will break up the mercurial chloride into its constituant parts and thereby destroy its germicidal qualities to the degree necessary to satisfy the albumen present; therefore for practical work the solution must be used much stronger than 1 to 1,000, or tartaric acid added as suggested by Dr. La Place.

The attempt to teach the practitioner how to stain bacteria is another instance of want of thoroughness to make it of use to either the student or surgeon.

The statement is made on p. 677: "Vomiting takes place as frequently in wounds of the abdominal parietes and in simple penetrating wounds as when the viscera have been injured." This is an error as vomiting is quite common in visceral injuries, but is exceptional in penetrating wounds without visceral injuries, *e. g.* A gunshot wound entering the abdomen, penetrating it and lodging in the dorsal muscles, nausea is absent; but a wound of the stomach or ilium is followed by the most persistent nausea. Again, on p. 680, under the head of "Preparation of the Patient," attention is called to the use of "atropia and morphia;" this in the hands of the most advanced operators has been strongly condemned as it gives very often a restless and uncontrollable patient. On p. 681, in discussing length and point of incision a long incision is again recommended, this incision is not practiced by expert operators; it increases the shock, loss of blood, exposure of viscera and undue manipulation to control of viscera; it necessitates the crowding of the ether to profound anæsthesia which should be avoided in all such cases. On p. 683, the use of sponges taken from chemical solutions is harmful; in fact the sponging of the peritoneal cavity at all does mischief. On p. 704, "Puncture of the Intestine" here is recommended, a procedure that is now considered not only uncertain—but a dangerous practice in the hands of anyone. On p. 789, "Ventral Hernia." This important subject does not receive the attention that it deserves; on account the number of abdominal operations in the hands of the inexperienced and careless operators ventral hernia has become very common, so much so, that a more thorough and detailed account should have been here given. The surgery of ventral hernia is new, trying and difficult.

In treating of diseases of the eye about as little has been written as could be written for the enlightment of the "Medical Profession and Medical Student of America" when it is remembered that but comparatively few general practitioners would undertake the operations for glaucoma, cataract, and the various plastic operations upon the eyelids. We cannot do an injustice to the solitary chapter of forty pages devoted to the subject if we quote its opening words. "In a brief article on the surgery of the eye it will be impossible to include its anatomy, physiology, pathology, therapeutics and the means of examination by instruments or glasses, or to do more than mention the causes that render a resort to surgical procedure necessary, and describe the various operations themselves. All reference to the diseases of the choroid and retina are omitted, as they belong rather to ophthalmic medicine than to surgery." This may be technically correct, but we might have reasonably expected a description of the ophthalmoscope and the method of using it. Such knowledge is certainly requisite for the modern ophthalmic surgeon. It seems somewhat inconsistent that reference should be made at some length to "paralytic squint due to disease involving the nerve centers or trunks or rheumatism." What does it avail a student to be told that

glaucoma occurs especially in the hypermetropic, and that at the sclerotic ring we may "find with the ophthalmoscope" "the characteristic *cupping* of the papilla" when he receives no hint either as to the nature of hypermetrophia, or the use of the ophthalmoscope? It would seem as if all helpful reference to instruments of precision for diagnosis were omitted from this work, leaving the student to search elsewhere for descriptions of the laryngoscope, rhinoscope, ophthalmoscope, endoscope, etc. What information as to diseases of the eye is vouchsafed, is accurate and reliable, but it manifests haste in preparation, is curt in diction, and includes references to "astigmatism," "stenapaic slit," and "high convex cylinders" which must be utterly unintelligible and bewildering to the student. Pp. 1108, which is devoted to the statistics of eye diseases might have been more profitably utilized for a short account of the ophthalmoscope or even a brief description of the anomalies of refraction and accommodation.

Chapters VI and X are so very unsatisfactory that they had better have been omited altogether. The work contains 37 plates and 437 wood cuts. Of the wood cuts, claim is made for 52 as original. Dr. Shadd, Professor at the Howard University Medical College, Washington, D. C., calls attention in the *Medical and Surgical Observer* February, 1893, to p. 198, "Enormous sarcoma of Buttock," says that he finds a photograph of his patient "taken from a duplicate picture of the cut, without any credit given to the Freedman's Hospital where the patient was for several months under treatment, and where the true type of the disease was diagnosed." This error can readily be set right in the second edition should the demand require one, together with other claims for credit.

A Manual for Boards of Health and Health Officers. By Lewis Balch, M. D., Ph. D., Secretary State Board of Health of New York; Health Officer of Albany; Emeritus Professor of Anatomy and Professor of Medical Jurisprudence, Albany Medical College. Banks & Brothers, Albany, N. Y. Price $1.50.

The Secretary of the State Board of Health, Dr. Lewis Balch, has prepared a Manual for the use of members of local Boards of Health, Health officers and all others interested in health matters. The book is exactly what it purports to be, a practical working Manual. It defines the powers of the State and local boards, it contains directions to the local health officer, it gives examples of problems which may arise and their solution, it offers suggestions for the prevention of disease and it includes directions to be followed in times of danger from epidemics of contagious diseases which formulate the best method of stamping these out which experience has devised. It solves many legal questions in the most plain and practical way. The value of the Vital Statistics gathered by the State Board is explained and the duty of those who are required by the law to fill out the certificates, is fully defined. Blank certificates, having the questions properly answered, are given as models to be followed. Bound with the Manual is a copy of the Public Health Law to which it is designed to serve as a Commentary. The volume will be found to be of the greatest value to all who are interested in the Public Health and it will enable Boards of Health and Health Officers to be certain of their positions in their dealings either with their Municipal governments or with the people.

PERISCOPE.

MEDICINE.

Gangrene Complicating Cholera.

Durr (*Rev. de Med.*,) first refers to the great rarity of this complication. He relates the following case in a man, aged 50, who had been suffering for some time from dyspepsia, and who was greatly afraid of cholera. On September 19th he was seized with premonitory diarrhœa, and two days later he was suffering from a typical attack of cholera. The reaction appeared on the 22nd, after which the patient, without permission, got out of bed. He was then seized with pain in the right leg, and the next day, ecchymoses appeared on it, and there was an absence of warmth and sensation. On the following morning the toes were gangrenous. On the 28th he died, the gangrene having extended nearly up to the knee, and no line of demarcation having formed. Only the leg was examined after death, and nothing was discovered besides, perhaps, some narrowing of the posterior tibial artery. The author then refers to twelve recorded cases, including another of his own. The gangrene may be dry or moist. Of the twelve, three were examples—all fatal—of moist gangrene (Mouchet), including two necropsies. In the other nine it was dry, and only two recovered. In these dry cases the arteries supplying the gangrenous area was obliterated. Thus this obstruction is constant, but there are three possible ways of explaining it: (1) embolism, (2) parietal arteritis, and (3) localized arterial spasm. Potain says that in enteric fever there is often spasm of the arteries of the limbs, but, if death occurs, the artery is found permeable. Varcot has insisted on arterial spasm in cholera; thus in one case the left pulse was imperceptible, but later it could be felt. The spasm may cease, or be the first stage of obliteration. In the author's case of gangrene in the hand, there were two distinct periods, one of spasm, and the other of oblite-

ration of the artery separated by a remission, in which the arterial pulsation could be felt. Reasoning from other infective processes, the author is inclined to think that the arterial spasm is probably secondary to an arteritis, and is not a primary condition.—*Br. Med. Jour.*

Peptonuria in Phosphorous Poisoning.

Robitscheck (*Deut. med. Woch.*,) relates the following acute case from v. Jaksch's clinic. A girl, aged 19, took in solution the heads of five boxes of ordinary matches on November 27th. A few hours later there was vomiting and much pain in the epigastrium. On admission, (November 30th) she was apathetic, and still complained of much pain and vomiting. The conjunctivæ were slightly icteric, but the skin of normal color. Palpation over the liver and stomach regions was painful, but the liver could not be felt. The stomach was washed out with 8 litres of water, and then with a solution of copper sulphate—a method which has been used with good results in this clinic. Phosphorous was detected in the first washings. Albumen were present in the urine, and the deposit obtained by the centrifugal machine showed a few leucocytes and red blood cells. Careful examination proved the presence of abundant peptone. On December 1st, the skin and mucous membrane were yellowish. The patient was worse. There was no poikilocytosis or leucocytosis. The treatment consisted in the administration of sodium bicarbonate in large doses, potassic permanganate, and turpentine. The peptonuria was less marked. On December 2nd the liver was found to be enlarged and the icterus had increased. There was no destruction of red cells. No peptone was now present in the urine. The patient died the next day of cardiac failure. At the necropsy, the liver was found to be much enlarged, and abundant minute hemorrhages were present in the body. This case shows that peptonuria does occur in phosphorous poisoning. It differs from Maixner's observations, in which the peptonuria corresponded to the intensity of the symptoms, and gradually disappeared with recovery. Von Jaksch refers the peptonuria to the scorbutus. It is conceivable that it stands in relation to the hemorhages, and that the peptone appears as long as fresh and abundant hemorrhages occur in the body. It is important to prove the presence of peptone in the blood, but in this case the blood was only examined when the peptone was disappearing from the urine, and the biuret reaction was then doubtful.

SURGERY.

Massage in Muscular Rheumatism.

Graham (*Amer. Jour. Med. Sciences*, vol. cvi, No. 2, August, 1893), referring to lumbago, points out that this may arise from cold, strain, fatigue or rheumatism. Its pathology is probably coagulation of the semi-fluid contractile muscular substance, and adhesion of muscular fibrils, so that motion gives rise to partial, irregular and painful contractions. Retention of waste products occurs, the worst of these being uric acid. Recent cases of muscular rheumatism are almost invariably cured by a few massages. The same result may be brought about by rest, warmth, electricity, or the use of such drugs as salicylate of soda, though not so rapidly. Graham claims for massage five different actions, namely, mechanical, thermal, electrical, nervous, and chemical, and suggests that when a case of apparent muscular rheumatism not only does not yield but does not remain improved after a few massages, the probability is that the case is one of neuritis affecting the nerve fibres that supply the impaired muscles. This probability would be strengthened when the pain is uniform, affecting the same muscles on both sides, when it is worse at night, when at rest and warm in bed, and better when up and moving about; whereas muscular rheumatism is aggravated by motion and relieved by rest and warmth. Massage may thus be used as a means of diagnosis between muscular rheumatism and neuritis.

Riders' Bursa.

Le Fort and Albert (*Rev. de Chir.*) report four cases of a swelling near the knee, to which they give the name of riders' hygroma. According to these surgeons, there is often developed in horseriders a subcutaneous serous bursa seated near the inner surface of the knee, which is caused by the rubbing of this part of the limb against the saddle. This serous bursa, like the normal bursæ, cannot be made out in the healthy condition by ordinary modes of investigation. It sometimes becomes inflamed and swollen as a result of irritation, and there can be no doubt that this condition may run on to suppuration, although no case of this kind has yet been recorded. The situation of this bursa varies in different subjects according to the degree of outward turning of the foot during riding. Its most common situation is over the internal condyle, the center of the sac being a little behind the centre of this surface of bone. The tumor formed by the swollen bursa is rounded or oval, and usually presents the character of an ordinary hygroma. It is quite superficial, moves freely with the skin, has no direct connection with the bone, and, except in rare instances, does not communicate with the interior of the joint. It is by no means a troublesome affection. Acute or subacute inflammation of the sac will interfere, while the attack lasts, with the movements of the knee, but afterwards this restriction will soon cease. Chronic enlargement of the bursa will not impede either flexion or extention of the leg, and, unless the swelling be very large, will not prevent the rider from mounting his horse. This variety of chronic hygroma will, it is thought, be found of frequent occurence if attention be more widely directed to the condition. The treatment recommended is that usually applied to similar swellings in other regions, the method preferred by the authors being that of puncture followed by compression.

Electrolysis in Fibrous Ankylosis.

Gwyer (*Annals of Surgery*) draws attention to the great value of the galvanic current as a means of dissolving new-formed fibrous adhesions. The author usually uses one large flat electrode and one small sponge electrode with handle. The large electrode should be nearest the adhesions and attached to the negative pole, and the small one applied to the opposite side. Both electrodes should be wet with salt solution, and of solutions tried the best results have been obtained with a rather strong one of ammonium chloride. The current is turned on, and increased till the patient will stand no more. The older the adhesions, the greater the current necessary to dissolve them, and Gwyer believes in a strong current for a short time rather than a weak one for a longer period. The current should be applied from ten to thirty minutes at intervals of from one to five days.

New Method of Direct Fixation of Fragments in Compound and Ununited Fractures.

Senn (*Annals of Surgery*) makes an earnest plea in favor of a more frequent recourse to direct means of fixation in the treatment of ompound a nd ununited fractures. In preference to suturing, metallic spikes and screws, or ivory cylinders and clamps, Senn prefers, as absorbable interosseus splints, hollow perforated cylinders of bone introduced into the medullary canal; these do not interfere with production of callus, and are more quickly absorbed than ivory or metal. But the safest and most efficient means of direct fixation of oblique fractures is by bone ferrule, applied in such a way as to surround both fragments. Such a circular absorbable direct splint prevents to perfection lateral and longitudinal displacement, and rotation of the limb below and angularity at the seat of fracture must be prevented by plaster-of-Paris splint. Senn has employed this method in three cases with excellent results.—*Br. Med. Jour.*

OBSTETRICS.

Hæmophilia and Parturition.

Wehle (*Centralbl. f. Gynak.*) opened an important discussion on that question at the May meeting of the Dresden Gynecological Society. The patient, in a case under his own observation, was a primipara, aged 33. After being for ten hours in labor at term, she had rigors; the membranes had burst one hour previously; the fœtal head lay in the first position, in the outlet. Flooding had set in. Wehle gave morphine and waited one hour, then delivered by a single traction with the forceps. The peritoneum and clitoris (slightly wounded) bled freely, and so did several abrasions. The wounds were sutured. The placenta was extracted by expression, after free flooding. Three defects were noted on its surface. Hot water was injected into the uterus. Whilst this was being done the three missing pieces of placenta were removed. Ergot was given; the uterus contracted and the flooding ceased for a while, but the small abrasions, which had been sewn up, began to bleed, and deeper sutures had to be applied. Then the flooding set in again, and the uterus was plugged with iodoform gauze. A laundress's iron, placed over the middle line where there was a gap between the recti, served well to ensure counterpressure. The vagina required firm plugging, as the sutured wounds and the tracks of the sutures bled freely. The patient was in a state of collapse. In two hours, after taking stimulants, she rallied. On the third day the vaginal tampon, and on the fourth the uterine plug, were removed. For six weeks bright-red blood occasionally trickled away, and five weeks later she was very anæmic and rather weak. In the child the stump of the cord bled, though twice ligatured. Wehle found that the patient's father had been subject to epistaxis, and died, aged 42, of cerebral hemorrhage. One of his brothers was also troubled with epistaxis. One of the patient's sisters had flooding for a whole day when 18, and severe flooding after the birth of her third child; and her nose often bled. One brother (also subject to epstaxis) was seized, when 17, with pains in the joints, and died of extensive subcutaneous hemorrhages. It further transpired that the patient herself, when 2 years old, bled freely from the genitals after a fall. When 12 she bled from the alveolus for a day after extraction of a tooth, and she had epistaxis and bleeding from the gums during her pregnancy. There was no history of syphilis or nephritis, no atony of the uterus, nor laceration of the cervix. The discussion turned on the diagnosis of hæmophilia from syphilis. Manuel saw fatal epistaxis in an infant, aged 3 days, notwithstanding careful plugging. The father had suffered from a hard sore. Meinert stated that the father was also syphilitic in a case where the stump of the cord bled for four days. Marschner recorded three labors where there was great flooding during the third stage, without any anatomical explanation. Professor Leopold attributed flooding in Marschner's case to atheroma of the walls of the vessels in the uterine mucous membrane. When there was no hereditary history the obstetrician should not be too ready to attribute bleeding to hæmophilia. Mothers with syphilis often flooded in the third stage, and syphilitic children were subject to bleeding.

Labor Obstructed by Ovarian Tumor.

A. F. A. King delivered a white woman, an 8-para, aged 38, in a Washington hospital, in December, 1892. She had been over five days in labor, yet was not exhausted. The perineum was distended the anus patulous, and a tumor filled the pelvic cavity so as to leave only just enough space between its anterior aspect and the symphysis to admit two fingers by which the presenting part (the face) could be felt, just beginning to enter the pel-

vic brim. The tumor was so tense that there was doubt as to its being solid or cystic. King punctured it through the rectum, believing that rectal puncture would be less liable than vaginal to infection from the lochial discharge, and that the puncture would be less obstructed by pressure of the presenting part. Ovarian fluid free from odor escaped, with increased rapidity during the pains. When the obstructing mass had disappeared the cannula was removed, and with a few more strong pains the face descended, the chin swept round to the pubes, and a dead child was born, without further aid, in about fifteen minutes. The cord, 21 inches long, was flaccid and brownish. The placenta followed, and the patient recovered. A month later she was admitted into another hospital with fever, expectoration, and dulness with moist *rales* over the right lung. The tumor reached two inches above the umbilicus, and pressed downwards in the pelvis. The right foot was œdematous, and there was tenderness, without redness, along the femoral vessels. When the patient was under examination it gave way, a profuse discharge of fœtid pus escaping from the rectum. An incision was made in the posterior vaginal wall, and a gallon of offensive pus came away. A drainage tube was inserted, and the cyst cavity irrigated for three weeks. After staying two months in hospital the patient was discharged, the cavity had completely closed, and the lung symptoms were much better.—*Am. Jour. Obstet.*

Membranous Dysmenorrhœa and Uterine Casts.

Schonheimer (*Archiv. f. Gynak.*), in a memoir on the pathological anatomy and symptomatology of menstrual uterine casts, shows that the separation of a structure more or less like the entire endometrium in shape, is the result of chronic inflammatory changes. These changes cause the uterus to shed fibrinous structures in great quantity at the menstrual period. This phenomenon is never seen between the periods, and it gives rise to the disorder known as membranous dysmenorrhœa. Sometimes, but not necessarily, the exfoliation of membrane is accompanied by an acute local inflammatory process. Schonheimer relates two instructive cases. The first was a typical instance of membranous dysmenorrhœa. The patient was 29. The catamenia began at 17, and were painful, though regular, from the first. At 23 she married. Coitus was always painful. The left tube was slightly thickened. A fortnight after marriage she suffered from discharge, but it soon passed away. At the age of 25, and thenceforth till when she came under observation, the patient passed flat three-cornered casts at every period. Dysmenorrhœa was intense, and the patient was sterile. The membranes were purely fibrinous deposit, full of leucocytes. Here and there some uterine epithelium was seen entangled in the meshes of fibrine. The os was dilated and the uterus scraped. The scrapings consisted of true endometrium tissue, showing hyperplasia of the sub-epithelial connective tissue without any acute inflammatory changes. As is usually the case, treatment was unavailing, and the patient continues to pass casts of the uterine cavity. The second patient was 43. When a girl she was anæmic, and did not begin to menstrurate till she was 20. The period was never regular till she married at the age of 26. She never had pain during the catamenial flow. She bore six children and aborted once. She showed no evidence of syphilis; all her labors were normal. After the last confinement she began to pass uterine casts at every third period. There was total absence of pain, the casts being discovered accidentally. Electricity was applied, and the curette was used; yet, just as in the cases where mensturation is painful, treatment did not alter the condition of the patient. She continues to pass clots. This case shows that pain is not an essential symptom of discharge of fibrinous membrane from the uterus, and that the phenomena in question does not necessarily entail sterility. —*Br. Med. Jour.*

THERAPEUTICS.

Treatment of Diphtheria.

Levy and Knopf (*Berl. klin. Woch.*) describe the treatment of this disease with papayotin (Gehe) and carbolic acid. They prepared the diphtheria poison after the method of Behring and Wernicke. When some papayotin was added to this diphtheria poison, and the mixture kept at 37° for two days, the virulence was much diminished. Thus papayotin has a weakening effect on the diphtheria poison. If papayotin were allowed to remain in contact with the living bacili without carbolic acid, the whole rapidity underwent putrefactive changes. In the treatment of cases the following preparation was used: Papayton, 10.0; ac. carbol. puriss. liquefact, 5.0; aq. destil. ad 100.0. The affected parts were gently painted every ten minutes for the first two hours, and then at intervals of every two hours afterwards, and this was continued during the night. There was rapid improvement in the local manifestations. The ice collar, abundant inhalations, and plenty of wine were used as usual. The cases of diphtheria when admitted are nearly always severe, the mild ones being kept at home. Encouraged by the good results, the authors sometimes delayed tracheotomy a little, and with satisfactory results. Of 51 cases thus treated 36 recovered, tracheotomy being performed once, and 15 died, of whom 5 were tracheotomized. Among the fatal cases there was 1 of genuine pneumonia, 1 of tuberculosis, 1 of repeated hemorrhage from the tracheotomy wound, and 3 of extensive broncho-puemonia. Among the recoveries there were 3 cases of nasal diphtheria, 13 of marked obstruction to the air passages, 2 of measles, and 1 of croupous pneumonia with naso-pharyngeal abscess. When compared with cases hitherto treated in the clinic (Strassburg), the mortality was

diminished and the number of tracheotomies lessened. Naturally the authors do not look upon this local treatment as unfailing, but the good results obtained have led them to publish them.

Combined Effects of Morphine and Sulphonal.

Gonzales (*Arch. di Farmacol. e di Terap.*,) recognizing the good points in the action of this hypnotic, but realizing also that its effects in man are not quite so satisfactory as the results of experiments on animals would have led us to think, was led to try to reinforce its action by association with morphine, the main trouble with sulphonal being that the sleep is neither very deep nor very lasting. The subject was first investigated on frogs, with the following results. Sulphonal alone in the mean dose of 0.04 gramme causes no symptoms save abolition of voluntary movements for some hours. Morphine alone (0.008 grammes of hydrochlorate) produces marked excitement, lasting for about an hour, the animal then returning to normal. The two drugs given in combination in the same doses caused marked and lasting narcosis, lasting for many hours. On the heart *in situ* sulphonal alone causes a slight diminution in the frequency, but increases the strength of the systole, and the amplitude of the diastole. Morphine alone only reduces the frequency. The mixture of the two drugs is without action on the frequency, but increases the force of the systole and amplitude of the diastole. Similar results were obtained in the case of the isolated heart. The results on mammals were as follows: In rabbits (doses 40 centig.) and dogs (doses 75 centig.) sulphonal produces sleep generally in half an hour from the administration, the reflexes and respiration being unaltered, and the heart beats frequent and vigorous; but the sleep is not at all profound, and in dogs is sometimes wanting. Morphine produces it in rabbits about twenty-five minutes after the injection, but the animals soon shake it off; in dogs it lasts a still shorter time. The mixture of the two drugs is perfectly successful both in dogs and rabbits. The sleep appears physiological, and lasts from seven to ten hours, and is not in any way complicated by unpleasant sequelæ; the heart and respiration are unaffected. The author finally recommends this mixture of the two drugs as an admirable and safe hypnotic, free from cardiac depressant action, and efficient even in insomnia due to neuralgia and nervous excitement.

Intravenous Injections of Corrosive Sublimate in Cases of Cerebral Syphilis.

This mode of treatment was first introduced into use in Italy by Baccelli. Jemma (*Rif. Med.*, July 18th, 1893), recognizing the brilliant results obtained from its use by this observer, has administered sublimate in the same manner in four cases of cerebral syphilis. He regards it as particularly suitable in such a case, for it is very necessary to secure a prompt action of the drug, and impregnation of the system through the gastro-intestinal tract is too often a slow process. The drug is made up into a 1 : 1000 solution with distilled water, and a little salt and alcohol to aid solution. It is administered by injection into one of the superficial veins of the arm, generally the cephalic, using an ordinary hypodermic syringe, and taking care to sterilize both the skin and instruments. The operation is quite easy, and causes practically no pain. The dose begins at 1 c.c., being increased to 2, 3, and 4 c.c., which last is the maximum employed. Its use in the author's four cases showed the method to be rapid in action, as well as safe, if performed with due care. The maximum effects are obtained with a minimum dose, and that without any pain such as accompanies hypodermic injections. The author has also employed the injections in other conditions, but beyond establishing the practibility of the method, his observations have not yet been sufficiently numerous to allow him to draw accurate conclusions. He promises shortly to give further details of these cases.

ARMY AND NAVY.

U. S. ARMY FROM SEPTEMBER 3, 1893, TO SEPTEMBER 9 1893.

Leave of absence for one month, is granted Major David L. Huntingdon, Surgeon U. S. Army.

Leave of absence for two months, to take effect from August 25, 1893, is granted Lieutenant Colonel Charles R. Greenleaf, Deputy Surgeon General, U. S. Army.

A board of officers to consist of Colonel Joseph C. Bailey, Assistant Surgeon General, Major Calvin DeWitt, Surgeon, and Major Henry M. Crohkhite, Surgeon, is appointed to meet at the call of the president thereof, at San Antonio, Texas, for the examination of such officers as may be ordered before it, with a view of determining their fitness for promotion.

Captain Henry S. Kilbourne, Assistant Surgeon, will report in person to Col. Joseph C. Bailey, Asst. Surg. General, president of the examining board, appointed to meet at San Antonio, Texas, for examination for promotion.

Captain Marcus E. Taylor, Assistant Surgeon, having been found by an Army retiring board, incapacitated for active service, is granted leave of absence, until further orders on account of disability.

Leave of absence for four (4) months, to take effect on or about October 25, 1893, is granted First Lieutenant Allen M. Smith, Assistant Surgeon U. S. Army.

Capt. Julian M. Cabell, Assistant Surgeon, is relieved from duty at Fort D. A. Russell, Wyoming, and ordered to Washington Barracks, D. C., for duty with the company of instruction of the Hospital Corps.